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CHARLES SPRAGUE SARGENT

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With Portrait

ON March twenty-second, Charles Sprague Sargent, for fifty-four years director of the Arnold Arboretum, died at his home "Holm Lea," Brookline, Mass., after a short illness in the eighty-sixth year of his age.

Charles Sprague Sargent was born in Boston on April 24th, 1841, the third child of Ignatius and Henrietta (Gray) Sargent. His father was a well-known merchant in the East India trade and a direct descendant in the fourth generation of William Sargent who probably came from England before 1678 and died in Gloucester, Massachusetts, in 1725. Charles prepared for College chiefly at E. S. Dixwell's School and graduated from Harvard in the class of 1862. In the following year, the civil war having started in 1861, he entered the military service of his country; he became First Lieutenant in the Second Louisiana Infantry and subsequently Aide-de-camp at the headquarters of the Department of the Gulf at New Orleans. On March 26th he was breveted Major of volunteers for "faithful and meritorious service" during the campaign against Mobile and on August 26th, 1865 he was honorably mustered out. After leaving military service he spent three years traveling in Europe and returned in the autumn of 1868 to take up the practice of horticulture and study of botany. In 1872 he became director of the Harvard Botanic Garden and was professor of horticulture during 1872 and 1873. On November 24, 1873 he was appointed director of the recently created Arnold Arboretum and served in both capacities until 1879, when he gave up the directorship of the Botanic Gardens to devote his entire time to the development of the Arnold Arboretum.

On November 26, 1873, he married Mary Allen Robeson, daughter of Andrew Robeson of Boston. She was an ideal companion and shared his tastes, his love of trees and of nature; she accompanied him in 1886 and 1887 on his cruises along the Florida coast for the exploration of the Florida Keys and went with him to Mexico. Being a skilful artist she painted the drawings illustrating the flowers and fruits of the trees represented in the collection of American woods prepared by Professor Sargent for the American Museum of Natural History in New York.

Almost all their married life was spent at their beautiful estate, Holm Lea, in Brookline where she presided as a charming hostess over a hospitable home. Her personality was pictured by Bishop Lawrence of Massachusetts at the time of her death which occurred on August 15, 1919, in these words: "Whenever she entered a room, be it drawing room filled with guests, a bedroom with a solitary invalid, or an institution filled with forlorn and wayward girls, the atmosphere was immediately charged with vitality, sympathy and cheer. She did not have to do or even say anything in order to be felt, her presence was enough; and her voice and deeds were the unconscious expression of a very warm heart and a very friendly spirit."

When in 1873 Sargent accepted the directorship of the new Arboretum, he found himself, as he stated later, "With a wornout farm, partly covered with natural plantations of native trees nearly ruined by excessive pasturage, to be developed into a scientific garden with less than \$3000 available for that purpose, without equipment or the support and encouragement of the general public which then knew nothing about an arboretum or what it is expected to accomplish." On the other hand, there were assets such as groves of old trees which covered part of the land and particularly a rocky hill with steep cliffs and covered with a fine growth of old Hemlocks at the foot of which flowed a picturesque brook. These handicaps, however, did not discourage Sargent. As the income was entirely inadequate for the development of such a large area as a botanic garden, Sargent and Frederick Law Olmsted, who at that time was engaged in planning and constructing a park system for the city of Boston, conceived the plan of having the Arboretum used with certain restrictions as a part of the Boston park system. This plan met with little favor and was opposed by the governing Board of the College and the Park Commissioners of Boston, but finally the two men succeeded in convincing both parties of the advantage of such an arrangement and in 1882 an agreement was signed whereby the City of Boston took the land and leased it back to the College for one thousand years with the option of renewing the lease after the expiration of that term. By this agreement the City was to undertake the construction and maintenance of roads and paths, the protection and policing the grounds, while at the same time the property was relieved of the danger of taxation; the grounds themselves were given over to the College for the planting of a collection of trees and shrubs. In the meantime plants for the collection had been raised and propagated in the greenhouses of the adjoining Bussey Institution available for this purpose, but it was not possible to begin planting on a large scale until 1886, as the City was slow in building the roads and the gravel paths. The area which in 1882 was less than 150 acres was soon found to be too small for an arboretum on a large scale and additions were made several times until the Arboretum now covers 250 acres.

During 1879 and 1882 Sargent had, as an agent of the Tenth Census,

charge of the investigation of the forests and forest resources of the United States. The results of these investigations are incorporated in a volume published as a part of the Tenth Census. This was the first important effort to bring together the facts in regard to American forests and furnished for many years the chief data on our forest resources. During his travels in connection with this work he visited all the important forested regions and made a large collection of specimens which formed the first important contribution to the herbarium he had started in 1878. He also brought together a remarkable collection of wood specimens of the American trees. This collection named the Jesup collection for Mr. Morris K. Jesup who provided the funds for it, is now in the Natural History Museum of New York and a duplicate set at the Arnold Arboretum.

In 1882 he was approached by Professor Spencer F. Baird to undertake the preparation of a *Silva of North America* to be published by the Smithsonian Institution, but when the work was started it became apparent that, the way the payments by the Smithsonian Institution were arranged, it would take at least seventy-five years to finish the work. Therefore, Sargent made another arrangement and engaged Charles E. Faxon, who had already shown great ability as a botanical artist, to prepare the plates; at the same time Faxon took charge of the herbarium and the library of the Arboretum. The first volume of this monumental work of fourteen folio volumes was ready in 1891 and the last of the 740 plates appeared just twenty-one years after Faxon had made the first drawing. The copper plates were engraved under the direction of the French artists Riocreux and Picart famous for their excellent plant portraits. The text shows the thoroughness and painstaking care characteristic of Sargent's work; of each species complete references to literature and synonyms and a detailed botanical description are given, followed by copious notes of general, economic and horticultural interest.

In 1882 and 1883 he was a member of the Northern Pacific Transcontinental Survey; during this survey the magnificent and extensive glaciers in northern Montana were discovered and Sargent advocated having this region declared a national park on account of its scenic grandeur, but nearly thirty years elapsed before it was set aside as Glacier Park by act of Congress.

In 1884 Sargent acted as chairman of the commission to investigate for the State of New York the Adirondack forests and to establish a conservation policy. In the winter and spring of 1885 with C. E. Faxon he visited some of the West Indian Islands to study the tropical and subtropical trees identical with those of southern Florida. In 1886 and 1887 he undertook several cruises along the Florida coast on the United States lighthouse tender *Laurel* placed at his disposal by the government for the purpose of studying the arboreal vegetation of the Florida Keys; he was accompanied by Mrs. Sargent and Messrs. J. M. Codman and C. E. Faxon. During one of these cruises in the spring of 1886 he discovered a new genus of Palm,

Pseudophoenix Sargentii, later found to be identical with a species growing on the Bahamas, though not before recognized as a new genus. In 1887 he traveled in Mexico and collected chiefly near Saltillo and Monterey.

In 1888 he started *Garden and Forest*, a magazine chiefly devoted to forestry, horticulture and botany, which he conducted for ten years until it was discontinued in 1897. Through this magazine he endeavored to rouse public interest in the preservation of the forests and in the inauguration of a definite forest policy, he advocated the creation of national parks and tried to awaken a deeper interest in horticulture and landscape gardening and in plants in their different aspects.

In 1892 he had the satisfaction of moving the library, the herbarium, and the offices of the Arboretum which had been kept up to that time in a private house in Brookline into a brick building erected for this purpose in the Arboretum grounds and for which Mr. H. H. Hunnewell, a devoted friend of the Arboretum, had furnished the money; later a new wing was added to provide room for the rapidly increasing herbarium.

In the same year Sargent visited Japan to study the forest flora of that country, bringing back a large number of specimens and many seeds of trees and shrubs new to American gardens. His observations he recorded in his "Forest Flora of Japan" first published in *Garden and Forest* in 1893 and later issued separately. There for the first time a comprehensive account of the trees and shrubs of Japan could be found with excellent illustrations of many of the more important species.

About 1900 Sargent began the study of the genus *Crataegus* as represented in America to which he devoted much of his time during the following twenty years; he described about 730 new species and introduced the larger part of them into cultivation. The Hawthorn plantation now forms a prominent feature of the Arboretum.

In 1902 he started a new publication under the title "Trees and Shrubs" in which new and noteworthy species were figured and described. Two volumes containing 200 plates were published, the last part appearing in 1913.

In 1903 Sargent undertook a tour around the world accompanied by his son Robeson Sargent and, during the first part of his journey, by John Muir, the well known Californian naturalist and author. He went first to Europe and visited London, Paris, Holland, Berlin and Leningrad; from Leningrad he made a short journey into Finland and then to the Crimea and Transcaucasia. Crossing the range of the Caucasus he reached Moscow and from there he traveled on the Trans-Siberian Railway to Manchuria and then to Peking where he was able to visit the Forbidden City. From China he went to Singapore and Java where he visited the famous botanical garden at Buitenzorg. He returned by the way of Japan and San Francisco bringing with him large botanical collections for the Arboretum including many seeds of trees and shrubs new to American gardens.

In 1905 he published his "Manual of the Trees of North America"

which might be characterized as an edition of his "Silva" condensed into one volume, with figures of all the North American trees known up to that time; a second edition came out in 1922 and a second reprint with corrections in 1926.

During the winter of 1905 to 1906 he traveled with his son Robeson in South America and collected chiefly in Peru and Chile. He went through the Straits of Magellan where he was delayed several weeks in the most southern town of the world. On account of this delay he had to give up his intended visit to the Argentine and returned home by way of the Falkland Islands, Rio, Cape Verde Islands and Lisbon.

From 1911 to 1917 he edited *Plantae Wilsonianae* in three volumes in which the extensive collection made by E. H. Wilson in China for the Arboretum was recorded and many new species described. In 1911 he also started to publish the *Arnold Arboretum bulletin of popular information* which was issued during spring and autumn and intended to give to the public general information on the more important and noteworthy trees and shrubs growing in the Arboretum. In 1919 the quarterly *Journal of the Arnold Arboretum* was started, intended chiefly for the more technically botanical papers prepared at the Arboretum.

About the middle of January 1924 Sargent was stricken by a severe attack of herpes, followed by intestinal gripe, which held him confined to the house for more than three months. After this he never regained his former strength, though he was able to attend to his duties and to come to the Arboretum regularly almost every day up to March 5th of this year. Feeling ill on that day he had to leave his office earlier than usual never to return. After an illness of seventeen days he passed away at six o'clock in the evening of March twenty-second.

He is survived by four children: Mrs. Guy Lowell (Henrietta Sargent), Mrs. Nathaniel Bowditch Potter (Mary Sargent), Mr. Charles S. Sargent, who is in the banking business in New York, and Miss Alice Sargent, who lived with her father. Another son, Andrew Robeson Sargent, died in 1918; he was a successful landscape gardener, associated with his brother-in-law Guy Lowell, the architect. Mrs. Sargent died in 1919.

Sargent was a man of strong personality; he was tall, of athletic build and like his father and great-grandfather of shy, retiring disposition, a man of few words, averse to public speaking and, though professor of arboriculture, he never lectured. He was an indefatigable worker, set in his purpose and slow to change his opinion. To those who knew him little his manner might have appeared abrupt or often aloof, but those who knew him better were aware that he had a warm heart. It was not easy to win his confidence, but those whom he trusted could trust in him. At home, in congenial company and among his friends he would unbend and though rarely taking a leading part would enter into the spirit of the company. Toward ladies he had a charming deferential manner which won him many friends. He always enjoyed, up to his illness three years ago, perfect health and lightly carried occasional hardships during his travels.

Sargent's one outstanding achievement was the creation and upbuilding of the Arnold Arboretum. Little did the men who placed on his hands an old wornout farm and an income of a few thousand dollars think that he would succeed in building up an institution which now ranks among the foremost botanic gardens and is the only large institution in the world devoted entirely to the study of trees and shrubs, with one of the richest botanical libraries and with a large herbarium more complete and richer than others in the representation of the ligneous flora of this country and of eastern Asia, so that for many years it has attracted besides others, Chinese and Japanese students who can study here the native flora of their countries to better advantage than in their own country. In the living collection Sargent always took the greatest interest and he himself gathered many seeds during his travels in this country and abroad by which he enriched it with new and rare trees and shrubs. He kept up connections with all important botanic gardens and nurseries in this country and in Europe and sent collectors to regions where plants grew that could be expected to thrive in the climate of Massachusetts. A catalogue of the trees and shrubs growing in the Arboretum was a work he undertook only a short time before his death, and in which he showed much interest until the very last, but fate did not allow him to finish this task.

The library was perhaps that department of the Arnold Arboretum with which he had the closest personal connection. It was begun as his own private botanical library in 1873 and had grown to 6000 volumes when it was transferred in 1892 to the new administration building and presented to the University. But with this presentation his care for it did not cease and he continued to increase it at his own expense, so that the library as it stands now containing more than 37000 volumes and 8400 pamphlets is almost entirely his gift to the Arboretum.

In the herbarium which served as a base for his monumental work the "Silva of North America" he was always much interested and during the last years even more so than before. He had made plans to carry out his idea of making the herbarium the representative herbarium of the ligneous flora of the world and there were already last year several collectors in the field for the Arboretum collecting in remote quarters of the world. He himself had collected extensively in this country and on his various journeys abroad. Collectors for the Arboretum were sent out and large collections bought or acquired by exchange, so that the building erected for it in 1909 is already inadequate, for an herbarium of woody plants including the numerous, often bulky fruit specimens and samples of wood requires much more space than an ordinary herbarium.

In the development of a definite forest policy for the United States Sargent played an important and leading part. When it was realized in the early seventies that the timber supply of the country, long considered inexhaustible, showed signs of depletion, an agitation set in for the planting of trees particularly on the prairies and Sargent reported in 1875 and

1878 to the Massachusetts State Board of Agriculture on the planting of trees. This agitation caused the government of the United States to authorize a special study of the forests of the country in connection with the Tenth Census of 1880. Sargent was made chairman of a commission appointed for this purpose. He with other members of the commission visited and studied the most important forest areas of the country and published the results of this study in a comprehensive report published as a separate volume of the Tenth Census. This report contains a description of the forests of the country, a survey of the existing supply of standing timber, facts regarding the forest industries, a statement concerning the destruction of forests by fire and a summary of the existing information on the character and the quality of the different commercial woods. This report has remained for many years the chief source of information regarding the forests of the country. In 1884 he was appointed by the State of New York chairman of a commission to study the Adirondack forests which were in danger of ruthless exploitation. This report in which he outlined a definite forest policy for the State served as a basis for the establishment of a State Forest preserve and thus saved the Adirondack and Catskill forests for the people of New York. In *Garden and Forest*, a magazine he published from 1888 to 1897 he published numerous editorials and articles discussing forestry problems in order to educate the public, awaken its interest and arouse it to action on public questions relating to forestry. Among the more important discussions may be mentioned: the adoption of a definite national forest policy, the withdrawal of the public forests from further disposal to private individuals, their temporary patrol by the army against forest fires and depredations, the appointment of a commission to prepare a plan for the administration of public properties, the service of forests in watershed protection, the need of courses in forestry in the higher educational institutions. When in 1896 Congress had authorized the National Academy of Sciences to make an investigation and report on the inauguration of a national forest policy for the forested lands of the United States, the Academy appointed Sargent chairman of a committee on this question. The members of the committee visited the West to obtain first hand knowledge of the public forests. As a result of their report President Cleveland set aside new forest reservations in addition to the few already established under the Act of Congress of March 3, 1891, aggregating in all more than twenty million acres. This action met with strong opposition and protest in the West, and when President McKinley took office he was hard pressed to annul the actions of his predecessor who had signed the proclamation concerning the reservations just before the completion of his office. The committee of the National Academy urged the President to stand firm against this pressure and Sargent had a long interview with the President with the result that the latter decided to take no action in the matter and let the reservations stand. The President stated afterwards that he had intended to return the reservations to the

public domain thus making them available for private exploitation before the conference with the committee and its chairman changed his mind. Sargent also strongly advocated the creation of national parks. Already in 1883 he recommended setting aside the glacier region in northern Montana as a national park, which was finally done nearly 30 years later by an act of Congress. In 1897 he recommended that funds be raised to save at least some remnants of the noble Redwood forests on the Pacific coast which also was done many years later.

Sargent's contributions to horticulture and to American horticulture in particular are various and many. Of the greatest importance is, without doubt, the introduction of a very large number of trees and shrubs into American gardens and into cultivation generally, chiefly from eastern Asia as a result of his own journeys and the expeditions sent out by the Arboretum. The number of trees and shrubs introduced to this country by the Arboretum is more than 1000 and those first introduced into cultivation number about 790 besides 570 new species of *Crataegus*. Among those introductions which have gained great popularity may be mentioned the Japanese Barberry, *Berberis Thunbergii*, which is now found in almost every garden, Kaempfer's Azalea, *Rhododendron obtusum* var. *Kaempferi*, the hardiest of the Indian Azaleas, and *Clematis paniculata*, one of the most striking autumn-flowering vines. Also the introduction of a hardy race of the Cedar of Lebanon merits mention. Sargent's translation into English of the book on tree pruning by Des Cars and the practical application by him of the principles laid down in that work to the old Oaks in the Arboretum and their subsequent rejuvenation has done much to bring the advantages of correct and scientific tree pruning before the public. At Holm Lea, his beautiful estate of about 180 acres in Brookline, one of the finest estates in this part of the country, he set a splendid example to garden and plant lovers and influenced landscape gardening throughout New England and beyond. His garden was particularly famous for a large collection of fine plants of Indian Azaleas which made a wonderful display when in bloom. These and the Rhododendrons, the Lilacs, Wistarias and other plants attracted thousands when he threw his grounds open to the public on certain days in the spring. In collaboration with his friend H. H. Hunnewell he has made the cultivation of Rhododendrons popular in New England by showing that it is possible to grow them successfully even in this rather severe climate. As vice-president of the Massachusetts Horticultural Society and trustee for fifty-four years and president for twenty-eight years of the Massachusetts Society for the promotion of agriculture he exerted great influence on the progress of horticulture. Through the "*Arnold Arboretum Bulletin of popular information*" which he published from 1911 until his death, he made the treasures of the Arboretum known to a large circle of readers and induced them to try in their gardens the many beautiful trees and shrubs of recent introduction.

Of Sargent's contributions to botany his monumental work "The Silva of North America" published in fourteen folio volumes with 740 plates easily takes first rank, but a wider circle of students of the North American forest flora was reached by his "Manual of the trees of North America" which in fact is a condensed "Silva" brought up to date: in its second edition published in 1922 there are 783 trees illustrated. One of the most important contributions to American botany is his work on American Hawthorns; between 1901 and 1923 he published numerous papers on *Crataegus* describing about 730 new species and revising the *Crataegus* flora of certain regions. He also was especially interested in American species of *Tilia*, *Quercus*, *Aesculus* and *Carya* and other trees; he wrote several papers dealing with these genera and described many new species. He also furthered greatly our knowledge of the flora of the Far East. He gave in his "Forest Flora of Japan" a comprehensive account of the forest flora of Japan, but it is with the flora of China that his name is most intimately connected; he sent collectors to different part of China to gather herbarium specimens and seeds. Among these collectors E. H. Wilson easily ranks first, and to record and describe the plants he brought back, Sargent published "*Plantae Wilsonianae*" a work of three volumes which is one of the most important contributions to the flora of China. The *Journal of the Arnold Arboretum* edited by him since 1919 also contains many papers concerning the flora of eastern Asia chiefly based on the herbarium of the Arboretum. For bringing together in that herbarium such a good representation of the flora of eastern Asia, the students of that rich flora are greatly indebted to him. The herbarium and the library of the Arnold Arboretum are monuments of his foresight which will be appreciated even more in the future than they are at present.

Sargent also found time for public service in other fields. He was Park Commissioner of the Town of Brookline, Trustee of the Museum of Fine Arts of Boston and of the Brookline Library, he held offices in some corporations and was a member of several clubs.

Many honors were bestowed upon Sargent during his long and active life. He was fellow of the American Academy of Arts and Sciences, member of the National Academy of Sciences, American Philosophical Society, St. Louis Academy of Sciences, Société botanique de France, Société nationale d'horticulture de France, foreign member of the Linnean Society of London, corresponding member of the Academy of National Sciences of Philadelphia, Botanical Society of Edinburgh, Société centrale forestière de Belgique, honorary member of the California Academy of Sciences, Royal Irish Academy of Dublin, Botanical Society of Tokyo, Société nationale d'agriculture de France, Deutsche dendrologische Gesellschaft, Forestry Society of Finland, Dendrological Society of Prague, Scottish Arboricultural Society, Société nationale d'acclimatation de France, English Rhododendron Society, Garden Club of America, Women's National Garden and Farm Association of America. In 1907 he received from Harvard

University the degree of LL.D. In 1910 the first award of the George Robert White medal, intended for the man who did most to advance the cause of horticulture during the year, was made to him by the trustees of the Massachusetts Horticultural Society. In 1920 the Garden Club of America presented its first medal of honorary award to him in recognition of his services to horticulture in general and to the gardens of America in particular. In 1923 he was given the Frank N. Meyer Horticultural medal by the American Genetic Association for "distinguished service in the field of foreign plant introduction." In the following year the Loder Rhododendron cup of the Royal Horticultural Society of England went to him, the first time that the cup had been sent out of Europe. Several books have been dedicated to him, as the 137th volume of the *Botanical Magazine*, E. H. Wilson's "The Romance of our trees," A. Rehder's "Manual of cultivated trees and shrubs" and the first volume (not yet published) of H. H. Hu's "Icones plantarum sinicarum." Many plants have been named in his honor: *Sargentia* S. Wats., a Mexican tree belonging to the Rutaceae with one species *S. Greggii* S. Wats.; *Sargentodoxa* Rehd. & Wils., constituting the family of Sargentodoxaceae, with one species *S. cuneata* Rehd. & Wils.; *Sargentiella* Koehne, a subsection of *Prunus*; and the following species and varieties: *Aesculus glabra* var. *Sargentii* Rehd., *Berberis Sargentiana* Schneid., *Campylotropis Sargentiana* Schindl., *Clematis Simsii* var. *Sargentii* Rehd., *Crataegus Sargentii* Beadle, *Cupressus Sargentii* Jeps., *Erycibe Sargentii* Merr., *Eugenia Sargentii* Merr., *Evonymus Sargentii* Loes. & Rehd., *Ficus Sargentii* Merr., *Fraxinus Sargentiana* Lingelsh., *Hydrangea Sargentiana* Rehd., *Juniperus chinensis* var. *Sargentii* Henry, *Lonicera Sargentii* Rehd., *Magnolia Sargentiana* Rehd. & Wils., *Malus Sargentii* Rehd., *Omphalea Sargentii* Merr., *Philadelphus incanus* var. *Sargentianus* Koehne, *Picea Sargentiana* Rehd. & Wils., *Populus Sargentii* Dode, *Prunus Sargentii* Rehd., *Pseudophoenix Sargentii* H. Wendl., *Quercus Sargentii* Rehd., *Rhamnus Sargentianus* Schneid., *Rhododendron Sargentianum* Rehd. & Wils., *Sorbus Sargentiana* Koehne, *Sorbus Sargentii* Dipp., *Spiraea Sargentiana* Rehd., *Syringa Sargentiana* Schneid. and *Viburnum Sargentii* Koehne. Also garden forms of *Rhododendron*, *Syringa* and *Rosa*, genera in which he had been much interested from a horticultural point of view have been named for him and members of his family.

Endowed with a strong personality he devoted a long life to his chosen work and well fulfilled the duties laid upon him. He has passed from us leaving a monument than which none could be more inspiring. The trees he planted will keep his memory green and his name will live as long as the Arnold Arboretum stands.

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- xiv. 1912. A Connecticut station for *Ilex mollis*, p. 205.
- xvii. 1915. Three of Clayton's Oaks in the British museum, pp. 39-40; Washington (George) and Michaux, pp. 49-50.
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- v. 1924. Notes on North American trees, xii, pp. 41-49.
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- vii. 1926. Corrections and emendations of the second edition of Sargent's *Manual of the trees of North America*, pp. 1-21.

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The first fifty years of the Arnold Arboretum. [Lancaster. 1922.]

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The greatest garden in America; the Arnold Arboretum. (Home Acres, xiv. 95, 112, 2 fig. February, 1927.)

AN ENUMERATION OF THE LIGNEOUS PLANTS OF ANHWEI

ALFRED REHDER AND ERNEST H. WILSON

THE Chinese province of Anhwei has remained botanically almost a terra incognita until recent years. In Hemsley's *Index flores sinensis* published between 1886 and 1904 Anhwei is mentioned only a few times and in H. H. Chung's *Catalogue of trees and shrubs of China* the name occurs hardly at all. The botanical exploration of this province did not start until it was taken in hand by the botanical departments of the University of Nanking and of the National Southeastern University of the same city, and almost all the plants enumerated below were collected between 1922 and 1925 in the southern part of the province by various collectors of these two institutions.

Anhwei is situated between 115° and 120° E. Long. and 29° and 34° N. Lat. and borders east on Kiangsu and Chekiang and west on Honan, Hupeh and Kiangsi. It is traversed by the Huai and the Yangtze River. The central and southern part is mountainous; the mountain ranges run approximately from southwest to northeast and the highest peaks probably do not much exceed 5000 feet in altitude.

The specimens enumerated below are all in the herbaria of the Arnold Arboretum and of the University of California; we are indebted to Dr. E. D. Merrill for the loan of all the woody Anhwei plants of the last named herbarium which enabled us to give a fairly complete enumeration of the trees and shrubs known at present from Anhwei. The specimens collected by R. C. Ching are with few exceptions represented in the herbarium of this institution, while those of other collectors are in the herbarium of the University of California with some duplicates in our herbarium.

GINKGOACEAE

Determined by E. H. WILSON

Ginkgo biloba Linnaeus, Mant. alt. 313 (1771).—Miquel in Siebold & Zuccarini, Fl. Jap. II. 73, t. 136 (1870).—Rehder & Wilson in Sargent, Pl. Wilson. II. 1 (1914), where citations of literature and synonymy are given. *Salisburia adiantifolia* Smith in Trans. Linn. Soc. III. 330 (1797).

Wang shan, alt. 850 m. *R. C. Ching*, no. 3058, July 20, 1925 (a large tree, fairly common in villages).

TAXACEAE

Determined by E. H. WILSON

Cephalotaxus Fortunei Hooker in Bot. Mag. LXXVI. t. 4499 (1850).—Wilson in Jour. Arnold Arb. VII. 39 (1926), where full citations of literature and synonymy are given.

Chu hwa shan, *R. C. Ching*, no. 2592, April 28, 1925 (tree 8 m. tall, girth of trunk 0.6 m.); Chu hwa shan, Chi yuen sze, alt. 1000 m., *A. N.*

Steward, no. 1124, Herb. Univ. Nanking no. 5253, April 24, 1924 (tree 3 m. tall); Wang shan, alt. 600 m., *A. N. Steward*, no. 1335, Herb. Univ. Nanking no. 7206, August 12, 1924, (tree 7 m. tall); Wang shan, woods, alt. 600 m., *K. Ling*, no. 1214, Herb. Univ. Nanking no. 7775, August 12, 1924, (tree 10 m. tall).

Cephalotaxus drupacea, var. *sinensis* Rehder & Wilson in Sargent, Pl. Wilson. II. 3 (1914).—Rehder in Jour. Arnold Arb. IV. 118 (1923).

Chu hwa shan, alt. 300 m., *R. C. Ching*, no. 2769, June 26, 1925 (tree 11 m. tall, bark brownish and fibrous).

Torreya grandis Fortune in Gard. Chron. 1857, 788; 1860, 170.—Gard. Chron. 1858, 588, fig.

Wang shan, alt. 1400 m., *R. C. Ching*, no. 3036, July 25, 1925 (tree 8 m. tall); same locality, alt. 1100 m., *A. N. Steward*, no. 1271, Herb. Univ. Nanking no. 7143, August 10, 1924; same locality, alt. 1100 m., *K. Ling*, no. 1166, Herb. Univ. Nanking no. 7741, August 9, 1924 (tree 10 m. tall, bark peeling in thin scales, fruit edible); Kimen, alt. 400 m., *K. Ling*, no. 1275, Herb. Univ. Nanking no. 7817, August 18, 1924, (tree 13 m. tall, girth of trunk 0.4 m.); Wu yuan, alt. 800 m., *N. K. Ip*, no. 51, Herb. Univ. Nanking no. 7674, August 19, 1924, (tree 16 m. tall, girth of trunk 0.4 m.); Kau toun, Tai ping hsien, alt. 160 m., *R. C. Ching*, no. 2883, July 3, 1925 (tree 15 m., bark gray, fibrous; rare).

Apparently the common tree in Anhwei Province; the fruits vary very considerably in size.

Taxus chinensis Rehder in Jour. Arnold Arb. I. 51 (1919); IV. 119 (1923).—Silva Tarouca & Schneider, Uns. Freiland-Nadelhölz. 34, fig. (1923).

Taxus cuspidata var. *chinensis* Rehder & Wilson in Sargent, Pl. Wilson. II. 8 (1914), where full synonymy is given.

Chu hwa shan, *R. C. Ching*, no. 2622, Herb. Univ. Nanking no. 7549, April 29, 1925, (tree 4 m. tall, rare); Chemen, alt. 100 m., *R. C. Ching*, no. 3168, August 1925 (tree 20 m. tall, girth of trunk 1.5 m.); Siunin, alt. 260 m., *R. C. Ching*, no. 3264, August 21, 1925 (tree 20 m. tall, girth of trunk 1 m.); Wang shan, alt. 600 m., *K. Ling*, nos. 1215, 1372, Herb. Univ. Nanking nos. 7776 and 7894, August 12, 27, 1924 (tree 20 m. tall, girth of trunk 0.5 m.); Tai ping hsien, Tan chai chiao, Wang shan, *A. J. Bowen*, no. 3, Herb. Univ. Nanking no. 12084, November 29, 1925 (tree 10 m. tall, girth of trunk 2 m.).

Podocarpus macrophyllus D. Don in Lambert, Descr. Pinus, II. 22 (1824); ed. minor, II. 143, (1832).—Miquel in Siebold & Zuccarini, Fl. Jap. II. 70, t. 133 (1870).—Wilson, Conif. Tax. Jap. 3 (1916).

Chemen, alt. 260 m., *R. C. Ching*, no. 3124, August 5, 1925 (tree 9 m. tall, girth of trunk 0.5 m., bark dark gray, rare).

PINACEAE

Determined by E. H. WILSON

Pinus Massoniana Lambert, Descr. Pinus, I. 17, t. 12 (1803); ed. 2, i. 16, t. 8 (1828); ed. minor, 20, t. 8 (1832).—Shaw in Sargent, Pl. Wilson. i. 1, (1912); ii. 14 (1914).

Chu hwa shan, *R. C. Ching*, no. 2653, May 1, 1925; Wang shan, alt. 2100 m., *K. Ling*, no. 1229, Herb. Univ. Nanking no. 7786, Aug. 12, 1924, (shrub 2 m. tall).

Pinus tabulaeformis Carrière, Traité Conif. ed. 2, 510 (1867).—Rehder in Jour. Arnold Arb. vii. 22 (1926).

Pinus sinensis Mayr, Fremdl. Wald. & Parkb. 349, fig. 113 (1906) in part.—Shaw in Sargent, Pl. Wilson. ii. 15, (1914); Gen. Pinus, 60, t. 23, fig. 201-207 (1914).

Wang shan, alt. 1400 m., *R. C. Ching*, nos. 3009 and 3038, July 1925 (tree 10-12 m. tall, girth of trunk 1.5-2 m.); Chu hwa shan, Chi yuen sze, alt. 1000 m., *A. N. Steward*, no. 1127, Herb. Univ. Nanking no. 5256, April 24, 1924, (tree 7 m. tall).

Pseudolarix amabilis Rehder in Jour. Arnold Arb. i. 53 (1919).

Abies Kaempferi Lindley in Gard. Chron. 1854, 255, 455, fig.

Pseudolarix Kaempferi Gordon, Pinetum, 292, (1853).—Rehder & Wilson in Sargent, Pl. Wilson. ii. 21 (1914), where full citations of literature and synonymy are given.

Pseudolarix Fortunei Mayr, Monog. Abiet. Jap. 99, (1890).—Hemsley in Bot. Mag. cxxxiv. t. 8176 (1908).

Chu hwa shan, *R. C. Ching*, no. 2637, Herb. Univ. Nanking no. 7565, May 1, 1925 (tree 20 m. tall, girth of trunk 1.3 m., common); Wang shan alt. 475 m., *R. C. Ching*, no. 3077, July 21, 1925.

Tsuga chinensis Pritzl in Bot. Jahrb. xxix. 217 (1900).—Chun, Chin. Econ. Trees, 22, fig. 7 (1922).—Wilson in Jour. Arnold Arb. vii. 50 (1926) where full synonymy is given.

Wang shan, alt. 1400-1500 m., *R. C. Ching*, nos. 2995 and 3018, July 1925, (tree 13-15 m. tall, girth of trunk 1 m., bark gray, rough); same locality, alt. 2300 m., near summit of mountain, *Y. M. Kwok*, no. 1, Herb. Univ. Nanking no. 12082, November 10, 1925 (tree 6 m. tall, girth of trunk 1.3 m.); same locality, alt. 1200 m., *K. Ling*, no. 1219, Herb. Univ. Nanking no. 7779, August 12, 1924, (tree 17 m. tall, girth of trunk 2.25 m., a solitary tree).

Pseudotsuga sinensis Dode in Bull. Soc. Dendr. France, 1912, 58, fig.—Wilson in Jour. Arnold Arb. vii. 52 (1926).

Wang shan, south side, alt. 810 m., *R. C. Ching*, no. 3059, July 20, 1925 (tree 20 m. tall, girth of trunk 1.5 m., bark gray, fissured, rare); same locality, alt. 1200 m., *A. N. Steward*, no. 7195, August 1924; same locality, alt. 1200 m., *K. Ling*, no. 1218, Herb. Univ. Nanking no. 7778, August 12, 1924 (tree 20 m. tall, girth of trunk 2.25 m.).

Cunninghamia lanceolata Hooker in Bot. Mag. LIV. t. 2743 (1827).—Rehder & Wilson in Sargent, Pl. Wilson. II. 50 (1914), where full citations of literature and synonymy are given.

Cunninghamia sinensis Brown apud Richard, Conif. 80, t. 18, fig. 3 (1826).

Chu hwa shan, Chi yuen sze, alt. 1000 m., *A. N. Steward*, no. 1139, Herb. Univ. Nanking no. 5268, April 24, 1924 (tree 7 m. tall).

Cryptomeria japonica D. Don in Trans. Linn. Soc. XVIII. 167, t. 13, fig. 1 (1841).—Wilson, Conif. Tax. Jap. 66, tt. 48–49 (1916), where complete references to literature and synonymy and a full account of this tree will be found.

Cupressus japonica Linnaeus f., suppl. 421 (1781).

South Siunin, alt. 130 m., *R. C. Ching*, no. 3326, Sept. 7, 1925 (tree 23 m. tall, girth of trunk 2 m. in open wood, rare).

Tuja orientalis Linnaeus, Spec. 1002 (1753).—Rehder & Wilson in Sargent, Pl. Wilson. II. 53 (1914), where full citations of literature and synonymy are given.

Wang shan, alt. 700 m., *R. C. Ching*, no. 3030, July 15, 1925 (tree 10 m. tall, cultivated); Li shan, Chemen, alt. 230 m., *R. C. Ching*, no. 3136, August 5, 1925, (shrub 2 m. tall, cultivated).

Juniperus formosana Hayata in Jour. Coll. Sci. Tokyo, xxv. art. 19, 209, t. 38 (Fl. Mont. Formos.) (1908); Icon. Pl. Formos. VII. 39, fig. 25 (1918).—Wilson in Jour. Arnold Arb. VII. 64 (1926), where full citations of literature and synonymy are given.

Chu hwa shan, *R. C. Ching*, no. 2582, Herb. Univ. Nanking no. 7508, May 1, 1925, (tree 6 m. tall, bark brownish gray, rough, peeling off in thin plates); without locality, *R. C. Ching*, no. 3023, 1925; Wang shan, alt. 1450 m., *A. N. Steward*, no. 1285, Herb. Univ. Nanking no. 7157, August 11, 1924 (tree 2 m. tall); same locality, alt. 1350 m., rocky places, *K. Ling*, no. 1182, Herb. Univ. Nanking no. 7726, August 11, 1924 (tree 2½ m. tall, branches pendulous).

Juniperus squamata var. *Fargesii* Rehder & Wilson in Sargent, Pl. Wilson. II. 259 (1914).—Rehder in Jour. Arnold Arb. IV. 126 (1923).

Wang shan, alt. 1400 m., *R. C. Ching*, no. 3049, July 17, 1925, (tree 10 m. tall); Chang gon shan, alt. 800 m., *R. C. Ching*, no. 3226, August 16, 1925, (tree 8 m. tall, girth of trunk 0.75 m.).

Juniperus chinensis Linnaeus, Mant. 127 (1767).—Miquel in Siebold & Zuccarini, Fl. Jap. II. 58, t. 126, 127, fig. 1, 2, 4 (1870).—Rehder & Wilson in Sargent, Pl. Wilson. II. 60 (1914), where full citations of literature and synonymy are given.

Chemen, alt. 230 m., *R. C. Ching*, no. 3125, August 5, 1925 (shrub 2.5 m. tall; temple garden).

GRAMINEAE

Determined by ALFRED REHDER

Arundinaria dumetosa Rendle in Sargent, Pl. Wilson. II. 63 (1914).Shu ling hsien, *K. Ling*, Herb. Univ. Nanking no. 7832, August 20, 1924.

As the specimen consists only of a sterile branch with two leaves, the identification is open to doubt; the leaves are up to 35 cm. long and to 7 cm. broad.

Arundinaria brevipaniculata Handel-Mazzetti, Pl. Nov. Sin. Forts. 6, p. 1 (Anz. Akad. Wiss. Wien, no. 19) (1920).Chu hwa shan, *A. N. Steward*, Herb. Univ. Nanking, no. 5252, April 24, 1924; Wang shan, *K. Ling*, Herb. Univ. Nanking no. 7781, August 12, 1924; Hangchow, *C. Y. Chiao*, Herb. Univ. Nanking no. 7979, April 30, 1925.*Phyllostachys bambusoides* Siebold & Zuccarini in Abh. Akad. Wiss. Münch. III. 745, t. 5, fig. 3 (1843).—Houzeau de Lehaie in Act. Congr. Intern. Bot. Bruxelles, II. 196, t. 48-51 (1912).—Camus, *Bambus*. 56, t. 27, fig. A (1913).South of Chu hwa shan, cultivated, *R. C. Ching*, no. 2892, July 3, 1925.*Phyllostachys puberula* Munro in Gard. Chron. n. ser. VI. 774 (1876).—Houzeau de Lehaie in Act. Congr. Intern. Bot. Bruxelles, II. 220, t. 52-54 (1910).—Camus, *Bambus*. 57, t. 28, fig. 8 (1913).*Phyllostachys Henonis* Mitford, Bamboo Gard. 149 (1896).—Stapf in Hooker's Icon. XXVII. t. 2614 (1899).Chu hwa shan, *W. A. Macklin*, Herb. Univ. Nanking, nos. 7423, 7425, May 25, 1923.*Phyllostachys nidularia* Munro in Gard. Chron. n. ser. VI. 773, 774 (1876).—Camus, *Bambus*. 63, t. 36, fig. A (1913).Chu hwa shan, *W. A. Macklin*, Herb. Univ. Nanking nos. 7424, and 7426, May 25, 1923; *A. N. Steward*, Herb. Univ. Nanking no. 5263, April 24, 1924; *R. C. Ching*, no. 2640, Herb. Univ. Nanking no. 7568, May 1, 1925 (3 m. tall, stems 1.2 cm. in diam.); north of Chu hwa shan, cultivated, *R. C. Ching*, no. 2709, Herb. Univ. Nanking no. 7636, May 3, 1925 (5 m. tall, stems 2 cm. in diam.).*Phyllostachys kumasasa* Munro in Trans. Linn. Soc. XXVI. 39 (1868), "*P. kumasasa*."—Mitford, Bamboo Gard. 162 (1896).*Bambusa kumasasa* Zollinger, Syst. Verz. Ind. Archip. Pflanz. 57 (1854), nom. nudum.—Steudel, Syn. Pl. Glum. 331 (1855).—Miquel, Fl. Ind. Bot. III. 419 (185), "*B. kumasasa*."*Phyllostachys ruscifolia* Hort. Kew in Hand-list Arb. Kew, II. 259 (1896).—Camus, *Bambus*. 63, t. 31, fig. B (1913), *P. kumasasa*.*Shibatana kumasasa* Makino in Tokyo Bot. Mag. XXVIII. 22 (1914).Ma chi, alt. 400 m., on open hillside, *R. C. Ching*, no. 3211 (sterile, 2 m. tall).

This species has apparently not yet been recorded from China. Munro when transferring Zollinger's and Steudel's specific name to *Phyllostachys* unfortunately changed it to *kumasaca*, whether he did it intentionally or whether it is a mistake is not quite clear. On p. 39 he cites *Bambusa kumasaca* Zoll. as a synonym but on p. 37 he speaks of *B. kumasasa* of Zollinger and states that Siebold says that the Japanese call all the herbaceous Bamboos "Sasa."

LILIACEAE

Determined by A. REHDER

Smilax herbacea L. var. *acuminata* Wright in Jour. Linn. Soc. xxxvi. 97 (1903).

Wang shan, alt. 800 m., *A. N. Steward*, no. 1338, Herb. Univ. Nanking no. 7209, August 14, 1924; Chu hwa shan, Erh sun tien, alt. 400 m., *R. C. Ching*, no. 4021, Herb. Univ. Nanking no. 8421, June 26, 1925; Wu yuan, alt. 800 m., *R. C. Ching*, no. 4480, Herb. Univ. Nanking no. 8859, August 16, 1925.

Smilax glabra Roxburg, Fl. Ind. ed. 2, III. 792 (1832).—Seeman, Bot. Voy. Herald, 420, t. 100 (1852-57).

South of Chemen, alt. 130 m., open thickets, *R. C. Ching*, no. 4434, Herb. Univ. Nanking no. 8815, August 13, 1925.

Smilax china Linnaeus, Spec. 1029 (1753).—Norton in Sargent, Pl. Wilson. III. 4 (1916).

Chu chow, *L. F. Tsu*, Herb. Univ. Nanking no. 146, April 13, 1921; Suchow fu, *S. N. Lei*, Herb. Univ. Nanking, no. 2980, September 25, 1922; Chu hwa shan, in open thickets, *R. C. Ching*, no. 2805, June 28, 1925 (height 10 m.); Chang gon shan, Wu yuan, in open thickets, alt. 750 m., *R. C. Ching*, no. 3240, August 17, 1923 (height 10 m.).

The berries of Ching's nos. 2805 and 3240 are unusually large measuring about 12 mm. in diameter, while those of Lei's specimen from Suchow fu measure only 6-7 mm. in diameter.

Smilax china var. *brachypoda*, var. nov.

A typo recedit foliis magis coriaceis, minoribus, petiolis brevibus circiter 5 mm. longis, stipulis petiolos fere aequilongis in auriculam circiter dimidio latam quam longam dilatatis, cirrhis tenuibus saepe rudimentariis, pedunculis brevioribus, baccis minoribus 5-6 mm. diam.—Frutex scandens, 2-3 m. altus (fide Ching), ramulis angulatis et striatis aculeatis. Folia pleraque late elliptica, rarius elliptica vel anguste elliptica, 3-5.5 cm. longa et 1.5-3.5 lata, apice abrupte breviter acuminata acumine recurvo, basi abrupte contracta et late cuneata vel fere rotundata, subcoriacea, trinervia, nervis lateralibus supra vix visibilibus subtus leviter elevatis; stipulae petiolo paullulo breviores, circiter 5 mm. longae et 2-3 mm. latae, in turionibus 1 cm. longae et ad 5 mm. latae.

Pedunculi fructiferi circiter 1 cm. longi; pedicelli 5 mm. longi; bacca in sicco lutea, 5–6 mm. diam.

ANHWEI: Wang si che, Chu hwa shan, in open thicket along stream, alt. 600 m., *R. C. Ching*, no. 2874, June 30, 1925.

KIANGSI: Siu feng sze, Lu shan, *A. N. Steward*, August 12, 1922, Herb. Univ. Nanking no. 2649 (type).

CHEKIANG: vicinity of Ningpo, *D. Macgregor*, 1908 (flowers); Tai chou, alt. 10 m., *R. C. Ching*, no. 1298, April 3, 1924.

This variety is smaller in all parts than typical *S. china* L. and its leaves are leathery and thicker and less prominently veined. In its large stipules nearly as long as the short petioles it resembles *S. discotis* Warb. but that species differs in the larger and usually narrower leaves subcordate or sometimes rounded at base, of thinner texture and glaucous beneath, and in the bluish black fruits on longer peduncles. The variety looks quite distinct from typical *S. china* and might be considered a distinct species, but some specimens of the variable *S. china* approach it and therefore it seems better to refer it as a variety to that species.

Smilax glauco-china Warburg in Bot. Jahrb. xxix. 255 (1900).

Chu hwa shan, Chi yuen sze, *A. N. Steward*, Herb. Univ. Nanking, no. 5265, April 24, 1924; Chu hwa shan, open places in the valley, *R. C. Ching*, no. 2649, Herb. Univ. Nanking no. 7577, May 1, 1925 (height 7 m.); Chu chow, *L. F. Tsu*, Herb. Univ. Nanking, no. 146, April 13, 1921; Chu chow, Lang yah tze, *A. N. Steward*, Herb. Univ. Nanking no. 5448, October 27, 1923; Wang shan, rocky gorge, alt. 1300 m., *A. N. Steward*, Herb. Univ. Nanking, no. 7154, August 11, 1924.

CHLORANTHACEAE

Determined by A. REHDER

Chloranthus spicatus (Thunb.) Makino in Tokyo Bot. Mag. xvi. 180 (1902).

Chloranthus inconspicuus Swartz in Phil. Trans. LXXVIII. 359, t. 15 (1787).

Wu yuan, alt. 630 m., *N. K. Ip*, no. 56, Herb. Univ. Nanking no. 7679, August 19, 1924.

SALICACEAE

Determined by A. REHDER

Populus adenopoda Maximowicz in Bull. Soc. Nat. Moscou, LIV. 50 (1879).—Schneider in Sargent, Pl. Wilson. III. 23 (1916).

Chu hwa shan, exposed hillside, *R. C. Ching*, no. 2596, Herb. Univ. Nanking no. 7521, April 28, 1925 (tree 16 m. tall, diam. of trunk 25 cm.).

Salix Wilsonii Seemen in Bot. Jahrb. xxxvi. beibl. LXXXII. 28 (1905).—Schneider in Sargent, Pl. Wilson. III. 40 (1916).

Heh hsien, alt. 800 m., *K. Ling*, no. 1254, Herb. Univ. Nanking no. 7800, August 14, 1924; foot of Chu hwa shan, open moist places, *R. C.*

Ching, no. 2717, Herb. Univ. Nanking no. 7551, May 3, 1925 (tree 25 m. tall); same locality, alt. 300 m., *R. C. Ching*, no. 2756, June 26, 1925 (tree 15 m. tall).

Salix Matsudana Koidzumi in Tokyo Bot. Mag. xxix. 312 (1915).—Schneider in Sargent, Pl. Wilson, III. 107 (1916).—Chun, Chin. Econ. Trees, 49, t. 15 (1923).

Chu hwa shan, open places, *R. C. Ching*, no. 2652, May 1, 1925 (tree 12 m. tall, of graceful appearance).

Ching's specimen differs from the type in its somewhat longer style, but agrees otherwise with *S. Matsudana*.

MYRICACEAE

Determined by A. REHDER

Myrica rubra Siebold & Zuccarini in Abh. Akad. Münch. iv. pt. III. 230 (Fl. Jap. Fam. Nat. II. 106) (1846).—Shirasawa, Icon. Ess. For. Jap. II. t. 6, fig. 12-23 (1908).

Myrica nagi C. De Candolle, Prodr. xvi. pt. II. 151 (1864).—Non Thunberg.

Li kau, west of Chemen, in open thickets, alt. 115 m., *R. C. Ching*, no. 3162, August 7, 1925 (shrub 10 m. tall); Wu yuan, alt. 240 m., *R. C. Ching*, no. 3285, August 29, 1925 (shrub, 12 m. tall).

JUGLANDACEAE

Determined by A. REHDER

Platycarya strobilacea Siebold & Zuccarini in Abh. Akad. Münch. III. 742, t. 5, fig. 1 (1843).—Miquel in Siebold & Zuccarini, Fl. Jap. II. 87, t. 149 (1870).—Shirasawa, Icon. Ess. For. Jap. I. t. 17, fig. 16-29 (1900).

Wang shan, on the way to Lion Ridge, alt. 600 m., *R. C. Ching*, no. 2973, July 12, 1925 (tree 20 m.).

Pterocarya paliurus Batalin in Act. Hort. Petrop. XIII. 101 (1893).—Chun, Chin. Econ. Trees, 64, t. 21 (1923).

Wang shan, *K. Ling*, no. 1238, Herb. Univ. Nanking no. 7792, August 13, 1924; Chu hwa shan, in woods, alt. 600 m., *R. C. Ching*, nos. 2629 and 2796, April 30 and June 28, 1925 (tree 27 m. tall).

Juglans cathayensis Dode in Bull. Soc. Dendr. France, 1909, 47, fig.; in Fedde Rep. Spec. Nov. x. 298 (1911).—Wilson in Gard. Chron. ser. 3, L. 189, fig. 88, t. (1911).

Chu hwa shan, in woods, *R. C. Ching*, no. 2631, Herb. Univ. Nanking no. 7559, April 30, 1925 (tree 28 m. tall).

BETULACEAE

Determined by A. REHDER

Carpinus cordata Bl. var. *chinensis* Franchet in Jour. de Bot. XIII. 202 (1899).—Winkler in Engler, Pflanzenr. IV.-61, 27 (1904).—Schneider, Ill. Handb. Laubholzk. II. 282, fig. 558 f (1912).

Nin tai, Chu hwa shan, in woods, alt. 1150 m., *R. C. Ching*, no. 2861, June 29, 1925 (tree 22 m. tall); Wang shan, in woods, alt. 1280 m., *R. C. Ching*, no. 3047, July 17, 1925 (tree 12 m. tall).

Carpinus laxiflora var. *Fargesii* Burkill in Jour. Linn. Soc. Bot. xxvi. 501 (1899).

Carpinus Fargesii Franchet in Jour. de Bot. xiii. 202 (1899).—Schneider, Ill. Handb. Laubholz. ii. 894, fig. 558 d, 559 q (1912).

Chang gon shan, Wu yuan, in woods, alt. 720 m., *R. C. Ching*, nos. 3220 and 3225, August 16, 1925 (trees 13 m. and 23 m. tall).

I refer these two specimens chiefly on account of their ovate subcordate leaves and on account of the bracts being not or inconspicuously lobed on their outer side with some hesitation to this variety of which I have seen no material from the type locality.

Carpinus laxiflora var. *macrostachya* Oliver in Hooker's Icon. Pl. xx. t. 1989 (1891).—Winkler in Engler, Pflanzenr. iv.—61, 33 (1904).

Chu hwa shan, in woods and bamboo groves, *R. C. Ching*, no. 2801, June 28, 1925 (tree 13 m. tall); Chang gon shan, Wu yan hsien, dense wood, *R. C. Ching*, no. 3215, August 16, 1925 (tree 20 m. tall); south Siu nin, open wood, alt. 420 m., *R. C. Ching*, no. 3323, September 7, 1925 (tree 13 m. tall); without locality and date, *R. C. Ching*, no. 2729 (flowering branch).

Carpinus laxiflora var. *Davidii* Franchet in Jour. de Bot. xiii. 203 (1899).

Wu yuan, *N. K. Ip*, Herb. Univ. Nanking no. 7692, August 22, 1924; *K. Ling*, same date, Herb. Univ. Nanking no. 7844; Li kau, Chemen, alt. 260 m., *R. C. Ching*, no. 3174, August 8, 1925 (26 m. tall; bark gray, smooth).

This variety differs chiefly in its narrower generally oblong-lanceolate leaves rounded to broad-cuneate at base and of firmer subcoriaceous texture and in its bracts being distinctly lobed on each side at base.

Carpinus Tschonoskii Maximowicz in Mém. Biol. xi. 313 (1881); in Bull. Acad. Sci. St. Pétersb. xxvii. 534 (1882).—Winkler in Engler, Pflanzenr. iv.—61, 36, fig. 10 m. (1904).—Schneider in Sargent, Pl. Wilson. iii. 441 (1916).

Carpinus yedoensis Maximowicz in Mém. Biol. xi. 314 (1881); in Bull. Acad. Sci. St. Pétersb. xxvii. 535 (1882).—Shirasawa, Icon. Ess. For. Jap. ii. t. 11, fig. 1-18 (1908).

Chang gon shan, west Wu yuan, woods, alt. 720 m., *R. C. Ching*, no. 3219, August 16, 1925 (tree 21 m. tall).

Corylus heterophylla var. *sutchuenensis* Franchet in Jour. de Bot. xiii. 129 (1899).

Wang shan, top of mountain, alt. 2000 m., *K. Ling*, no. 1205, August 12, 1924, Herb. Univ. Nanking no. 9614.

Betula luminifera Winkler in Engler, *Planzenr.* iv.-61, 91, fig. 23 a-c (1904).—Schneider, *Ill. Handb. Laubholz.* II. 882, fig. 552 d, 553 g-h (1912); in Sargent, *Pl. Wilson*, III. 455 (1916).

Wu yuan, alt. 900 m., *N. K. Ip*, no. 61, Herb. Univ. Nanking no. 7683, August 20, 1924; Wang shan, woods, alt. 580 m., *R. C. Ching*, no. 2936, July 11, 1925 (tree 13 m. tall); Chang gon shan, Wu yuan, woods alt. 600 m., *R. C. Ching*, no. 3238, August 17, 1925 (tree 20 m. tall).

Ip's specimen from Wu yen represents a form with densely pubescent young branchlets and petioles and leaves pubescent on both sides, while the other two specimens are glabrescent.

Alnus Jackii Hu in *Jour. Arnold Arb.* vi. 140 (1925).

Tai ping hsien, partially shaded wood, alt. 1220 m., *R. C. Ching*, no. 2889, July 3, 1925 (tree of medium size, only one seen).

The leaves of this specimen are considerably larger than those of the type, measuring up to 11 cm. in length and 6 cm. in width, on petioles up to 2.5 cm. long; the peduncles of the strobiles are 1-2 cm. long.

FAGACEAE

Determined by E. H. WILSON

Fagus longipetiolata Seemen in *Bot. Jahrb.* xxiii. Beibl. LVII. 56 (1897).—Rehder & Wilson in Sargent, *Pl. Wilson*. III. 190 (1916).

Fagus sylvatica var. *longipes* Oliver in Hooker's *Icon.* xx. t. 1936, in textu (1890).

Fagus sinensis Oliver, l.c., in tabula tantum (1890).

Chang gon shan, west Wu yuan, alt. 750 m. in woods, *R. C. Ching*, no. 3216, August 16, 1925 (tree 26 m. tall, girth of trunk 2 m., bark smooth, chalky white, fairly common).

Fagus Engleriana Seemen apud Diels in *Bot. Jahrb.* xxix. 285, fig. a-d (1900).—Rehder & Wilson in Sargent, *Pl. Wilson*. III. 191 (1916).

Wang shan, alt. 1100 m. in woods, *R. C. Ching*, no. 2967, July 12, 1925 (tree 11 m. tall, girth of trunk 0.6 m., bark dark gray, common).

Castanea Seguini Dode in *Bull. Soc. Dendr. France*, 1908, 152, fig.—Rehder & Wilson in Sargent, *Pl. Wilson*. III. 194 (1916), where full synonymy and citations of literature are given.

Chu hwa shan, *R. C. Ching*, nos. 2699 and 2748, May 2, 1925 and June 25, 1925 (bush 0.6-1.3 m. tall; common); Tientai, alt. 1300 m., *R. C. Ching*, no. 2855, June 29, 1925 (tree 20 m. tall, girth of trunk 2 m., bark gray, deeply fissured); Wang shan, alt. 1400 m. woods and open thickets, *R. C. Ching*, no. 3042, July 17, 1925 (tree 15 m. tall, girth of trunk 0.6 m., bark gray, rough).

Castanea Henryi Rehder & Wilson in Sargent, *Pl. Wilson*. III. 196 (1916), where full synonymy and citations of literature are given.

Castanopsis Henryi Skan in *Jour. Linn. Soc.* xxvi. 523 (1899).

Castanea Fargesii Dode in *Bull. Soc. Dendr. France*, 1908, 153, fig.

Chu hwa shan, *R. C. Ching*, no. 2654, May 1, 1925 (tree 21 m. tall, girth of trunk 2 m., bark gray fissured, common); without locality, *R. C. Ching*, no. 4101, 1925; Shu ling hsien, *K. Ling*, Herb. Univ. Nanking no. 7835, August 21, 1924 (tree 10 m. tall, girth of trunk 0.9 m., bark rough, fissured).

Castanopsis Fargesii Franchet in Jour. de Bot. XIII. 195 (1899).—Rehder & Wilson in Sargent, Pl. Wilson. III. 198 (1916).

Chemen, alt. 100 m., woods, *R. C. Ching*, no. 3175, August 8, 1925, (tree 30 m. tall, girth of trunk 2.3 m., bark light gray, common).

Castanopsis caudata Franchet in Nouv. Arch. Mus. Paris, sér. 3, VII. 87 (Pl. David. I. 277) (1884).—Rehder & Wilson in Sargent, Pl. Wilson. III. 201 (1916).

Chu hwa shan, alt. 650 m., ravines, *R. C. Ching*, no. 2811, June 28, 1925, (tree, 11 m. tall, rare); Wang shan, alt. 600 m., woods, *R. C. Ching*, no. 2905, July 5, 1925 (tree 15 m. tall, girth of trunk 0.6 m., bark dark gray, fissured); same locality, alt. 700 m., *K. Ling*, Herb. Univ. Nanking no. 7725, August 9, 1924, (tree 20 m. tall, girth of trunk 0.9 m., bark shallowly furrowed).

Castanopsis sclerophylla Schottky in Bot. Jahrb. XLVII. 638 (1912).—Rehder & Wilson in Sargent, Pl. Wilson. III. 201 (1916), where full synonymy and citations of literature are given.

Quercus sclerophylla Lindley in Lindley & Paxton, Flower Gard. I. 59, fig. 37 (1850-51).

Chu hwa shan, hillsides, *R. C. Ching*, no. 2663, May 2, 1925, (tree 18 m. tall, girth of trunk 1.75 m., bark gray, rough, splitting into plates, fruit edible; common); Wu yuan, alt. 450 m., woods, *K. Ling*, Herb. Univ. Nanking nos. 7840, 7841, 7842 and 7880, August 22, 25, 1924 (tree 10-18 m. tall, girth of trunk 0.45-1.8 m., bark scaling off).

Castanopsis Delavayi Franchet in Jour. de Bot. XIII. 194 (1899).—Skan in Jour. Linn. Soc. XXVI. 523 (1899).

Wu yuan, alt. 130 m., *R. C. Ching*, no. 3283, August 29, 1925, (tree 20 m. tall, girth of trunk 1 m.); Wang shan, alt. 530 m., top of mountains, *K. Ling*, Herb. Univ. Nanking no. 9621, August 18, 1924, (tree 20 m. tall, girth of trunk 0.6 m.).

It is a long way from western Yunnan to the Anhwei localities cited above but the two specimens before me agree very closely to the Yunnan material and I cannot refer them elsewhere. The pubescent shoots at once distinguish this tree from *C. sclerophylla* Schottky, the most closely related species. The collector notes that it is comparatively rare.

Quercus aliena Blume, Mus. Bot. Lugd.-Bat. I. 298 (1850).—Shirasawa, Icon. Ess. For. Jap. I. 55, t. 28, fig. 12-22 (1900).—Rehder & Wilson in Sargent, Pl. Wilson. III. 214 (1916), where full synonymy and citations of literature are given.

West Chemen, alt. 100 m., *R. C. Ching*, no. 3192, August 9, 1925, (shrub 6 m. tall, common.); Ching yang hsien, hillside, *K. Ling*, Herb. Univ. Nanking no. 7291, April 22, 1924.

Quercus Stewardii Rehder in Jour. Arnold Arb. vi. 207 (1925).

Wang shan, alt. 1450 m., woods and thickets, *R. C. Ching*, no. 3043, July 17, 1925 (tree 10 m., girth of trunk 0.75 m., bark gray, rough, common); same locality, alt. 2000 m., *A. N. Steward*, no. 1311, type, August 12, 1924, *K. Ling*, Herb. Univ. Nanking no. 9613, August 12, 1924.

Quercus Fabri Hance in Jour. Linn. Soc. x. 202 (1869).—Rehder & Wilson in Sargent, Pl. Wilson. iii. 216 (1916), where full citations of literature are given.

Chu pu, alt. 330 m., *N. K. Ip*, Herb. Univ. Nanking no. 5132, August 12, 1923 (tree 20 m. tall, girth of trunk 1 m.).

Quercus serrata Thunberg, Fl. Jap. 176 (1784).—Koidzumi in Tokyo Bot. Mag. xxxix. 313 (1925).—Non Siebold & Zuccarini et al.

Quercus glandulifera Blume, Mus. Bot. Lugd.-Bat. i. 295 (1850).—Shirasawa, Icon. Ess. For. Jap. i. 50, t. 26, fig. 13-24 (1900).—Rehder & Wilson in Sargent, Pl. Wilson. iii. 212 (1916), where complete citations of literature are given.

Chu hwa shan, Chi yuen sze, alt. 330 m., *A. N. Steward*, Herb. Univ. Nanking no. 5264, April 24, 1924, (shrub 1-2 m. tall); Wu yuan, alt. 1060 m., *N. K. Ip*, Herb. Univ. Nanking no. 7678, August 19, 1924; South Siunin, alt. 100 m., *R. C. Ching*, no. 3316, September 7, 1925 (tree 13 m. tall, girth of trunk 1 m., bark dark gray, deeply fissured, fairly common).

Koidzumi has examined Thunberg's original specimen and finds it is identical with the plant named *Q. glandulifera* by Blume, who has been followed by all subsequent authors. More recently Nakai has confirmed Koidzumi's observation. The species of *Quercus* nearly all authors have considered to be *Q. serrata* Thunberg must now be known as *Q. acutissima* Carruthers.

Quercus Chenii Nakai in Jour. Arnold Arb. v. 74 (1924).

Wu yuan, alt. 650 m., *R. C. Ching*, no. 3309, September 4, 1925 (tree 20 m. tall, girth of trunk 1-2 m.; common); east of Kweichow City, alt. 160 m., *R. C. Ching*, no. 3337, September 10, 1925 (tree 16 m. tall, girth of trunk 3 m., common).

These very complete specimens show that this is a good species.

Quercus acutissima Carruthers in Jour. Linn. Soc. vi. 33 (1862).—Nakai in Tokyo Bot. Mag. xxix. 57 (1915).

Quercus serrata Siebold & Zuccarini in Abh. Akad. Münch. iv. pt. iii. 226 (Fl. Jap. Fam. Nat. ii. 102) (1846).—Blume, Mus. Bot. Lugd.-Bat. i. 296 (1849-51).—Shirasawa, Icon. Ess. For. Jap. i. t. 26, fig. 1-12 (1900).—Rehder & Wilson in Sargent, Pl. Wilson. iii. 217 (1916).—Non Thunberg.

West of Kweichow city, alt. 130 m. tall, *R. C. Ching*, no. 3341, September 10, 1925, (tree 26 m. tall, girth of trunk 2-5 m.; rare).

Quercus variabilis Blume, Mus. Bot. Lugd.-Bat. i. 297 (1850).—Shirasawa, Icon. Ess. For. Jap. i. 54, t. 28, fig. 1-11 (1900).—Rehder & Wilson in Sargent, Pl. Wilson. iii. 219 (1916), where complete synonymy and citations of literature are given.

Chu hwa shan, *R. C. Ching*, no. 2602, April 28, 1925 (tree 33 m. tall, girth of trunk 1.57 m.; common); east of Kweichow City, alt. 160 m., *R. C. Ching*, no. 3336, September 10, 1925, (tree 26 m. tall, girth of trunk 2.5 m., bark gray; rare).

Quercus myrsinaefolia Blume, Mus. Bot. Lugd.-Bat. i. 305 (1850).—Rehder & Wilson in Sargent, Pl. Wilson. iii. 236 (1916), where full synonymy and citations of literature are given.

Quercus Vibrayeana Franchet & Svatier, Enum. Pl. Jap. i. 449 (1875).—Shirasawa, Icon. Ess. For. Jap. i. 55, t. 29, fig. 16-31 (1900).

Chu hwa shan, *R. C. Ching*, no. 2634, April 30, 1925 (tree 26 m. tall, girth of trunk 2-3 m.); Li shan, northwest Chemen, alt. 330 m., *R. C. Ching*, no. 3144, August 6, 1925, (tree 20 m. tall, girth of trunk 2-3 m., bark gray, smooth; rare); Chang gon shan, Wu yuan, alt. 500 m. tall, *R. C. Ching*, no. 3224, August 16, 1925, (tree 20 m. tall, girth of trunk 1 m., bark gray, common).

Quercus glauca Thunberg, Fl. Jap. 175 (1784).—Banks, Icon. Kaempfer, t. 17 (1791).—Shirasawa, Icon. Ess. For. Jap. i. 56, t. 30, fig. 13-24 (1900).—Rehder & Wilson in Sargent, Pl. Wilson. iii. 226 (1916), where full synonymy and citations of literature are given.

Quercus annulata Smith in Rees, Cyclop. xxix. no. 22 (1819).—Brandis, Forest Fl. Ind. 487, t. 65 (1874).

Chu hwa shan, *R. C. Ching*, no. 2620B, April 29, 1925, (tree 20 m. tall, girth of trunk 1.3 m.; common); Tien t'ai shan, alt. 900 m., *A. N. Steward*, Herb. Univ. Nanking no. 5298, April 25, 1924.—Wang shan, alt. 1200 m., *K. Ling*, Herb. Univ. Nanking no. 7773, August 12, 1924 (tree 13 m. tall, girth of trunk 0.9 m.); Wu yuan, *K. Ling*, Herb. Univ. Nanking nos. 7849 and 7869, August 23 and 24, 1924 (tree 10 m. tall, girth of trunk 0.75 m.).

In this species the leaves vary greatly in size and in texture.

Quercus glauca f. *gracilis* Rehder & Wilson in Sargent, Pl. Wilson. iii. 228 (1916).

Wang shan south side, alt. 900 m., *R. C. Ching*, no. 3061, July 20, 1925 (tree 15 m. tall, girth of trunk 1 m.; very common); Wang shan, forests, alt. 1800 m., *K. Ling*, Herb. Univ. Nanking no. 7748, August 11, 1924, (tree 6 m. tall, girth of trunk 0.35 m.); same locality, above Tze kuan sze, forests, alt. 1550 m., *A. N. Steward*, Herb. Univ. Nanking no. 7167, August 11, 1924, (tree 10 m. tall, girth of trunk 0.45 m.).

Quercus spathulata Seemen in Bot. Jahrb. xxiii. Beibl. no. LVII. 49 (1897).—Rehder & Wilson in Sargent, Pl. Wilson. iii. 226 (1916).

The material we have seen from Anhwei of this species represents a distinct variety which we have named:

Quercus spathulata var. *oxyphylla* Wilson, n. var.

A typo recedit foliis oblongo-lanceolatis vel lanceolatis 5-9 cm. longis et 2-3.5 cm. latis acutis mucronulatis versus apicem sparse dentatis vel integris.

Li shan, Chemen, alt. 200 m., woods, *R. C. Ching*, no. 3116, August 5, 1925, (tree 22 m. tall, girth of trunk 1.3 m., bark dark gray).

The acute oblong-lanceolate leaves, entire or with few teeth at the apex give this variety a very distinct appearance but the pubescence on the leaves and branches and the character of the cupular scales are identical with those of the type. Having in mind how great is the variation in foliage among all the evergreen prickly leaved Oaks as witnessed *Q. Ilex* Linn. I am satisfied that the difference is more obvious than real. According to the collector the material came from a large specimen, much larger than any I have knowledge of in Hupeh and Szechuan where the species is widely scattered though not common.

Lithocarpus cleistocarpa Rehder & Wilson in Sargent, Pl. Wilson. III. 205 (1916).

Quercus cleistocarpa Seemen in Bot. Jahrb. xxiii. Beibl. no. 57, 52 (1897).

Li shan, Chemen, alt. 1300 m., *R. C. Ching*, no. 3112, August 5, 1925, (tree 10 m. tall, bark dark gray, rough); Maich, alt. 960 m., *R. C. Ching*, no. 3208, August 15, 1925, (tree 20 m. tall, girth of trunk 1 m., bark gray, smooth); Kimen hsien, mountain top, alt. 950 m., *K. Ling*, Herb. Univ. Nanking no. 7824, August 19, 1924.

Lithocarpus Henryi Rehder & Wilson in Sargent, Pl. Wilson. III. 209 (1916).

Quercus Henryi Seemen in Bot. Jahrb. xxiii. Beibl. no. LVII. 50 (1897).

Wang che, Chu hwa shan, south, valleys, alt. 650 m., *R. C. Ching*, no. 2839, June 29, 1925 (tree 17 m. tall, girth of trunk 1 m., bark gray, smooth); Wang shan, alt. 360 m., *R. C. Ching*, no. 3055, July 20, 1925 (tree 15 m. tall, girth of trunk 1 m., bark gray); Wang shan, below Yuen ku sze, open forests, alt. 1000 m., *A. N. Steward*, Herb. Univ. Nanking no. 7205, August 12, 1924, (tree 10-15 m. tall, girth of trunk 1 m.); Wang shan, open places, *K. Ling*, Herb. Univ. Nanking no. 7774, August 12, 1924, (tree 15 m. tall, girth of trunk 1.15 m., bark gray, peeling off in thin shreads).

Lithocarpus glabra Rehder in Baily, Stand. Cycl. Hort. VI. 3569 (1917); in Jour. Arnold Arb. I. 126 (1919).

Quercus glabra Thunberg, Fl. Jap. 175 (1784); Icon. Pl. Jap. IV. t. 5 (1802).—Shirasawa, Icon. Ess. For. Jap. I. T. 33 (1900).

West Chemen, alt. 130 m.-160 m., *R. C. Ching*, nos. 3195 and 3180, August 9 and 8, 1925, (tree 8-15 m. tall, girth of trunk 0.75-1.3 m., bark gray, smooth); Kimen hsien, alt. 400 m., *K. Ling*, Herb. Univ. Nanking no. 7822, August 19, 1924, (tree 12 m. tall, girth of trunk 0.6 m., bark smooth, whitish).

ULMACEAE

Determined by A. REHDER

Ulmus parvifolia Jacquin, Pl. Rar. Hort. Schoenbr. III. 6, t. 262 (1798).—Shirasawa, Icon. Ess. For. Jap. I. 68, t. 37, fig. 1-9 (1900).—Schneider in Sargent, Pl. Wilson. III. 245 (1916).

South Siunin, alt. 300 m., *R. C. Ching*, no. 3315, September 6, 1925 (tree 15 m. tall).

Ulmus Davidiana Planchon in Compt. Rend. Acad. Sci. Paris, LXXIV. pt. I. 1498 (1872), nom. nudum; in De Candolle, Prodr. XVII. 158 (1873).—Franchet in Nouv. Arch. Mus. Paris, sér. 2, VII. 76, t. 8, fig. (Pl. David. I. 266) (1884).

Chuchow, Herb. Univ. Nanking no. 196, June 25, 1920.

Hemiptelea Davidii Planchon in Compt. Rend. Acad. Sci. Paris, LXXIV. 132, 1496 (1872); in De Candolle, Prodr. XVII. 165 (1873).—Franchet in Nouv. Arch. Mus. Paris, sér. 2, VII. 78, t. 9 (Pl. David. I. 268, t. 9) (1884).

Tai ping hsien, in thickets along banks of streams, alt. 1200 m., *R. C. Ching*, no. 2888, July 3, 1925 (spreading shrub).

Zelkova sinica Schneider in Sargent, Pl. Wilson. III. 286 (1916).

Zelkova acuminata Hemsley in Jour. Linn. Soc. XXVI. 499 (1894), pro parte.—Non Planchon.

Chuchow, Herb. Univ. Nanking no. 1025, June 25, 1920.

Pteroceltis Tatarinowii Maximowicz in Bull. Acad. Sci. St. Pétersb. XVIII. 293, fig. (1873); in Mém. Biol. IX. 27, t. (1873).—Chun, Chin. Econ. Trees, 115 fig. 43 (1923).

Chuchow, Lang yah sze, *A. N. Steward*, Herb. Univ. Nanking no. 2311, June 14, 1922; Li shan, Chemen, alt. 180 m., *R. C. Ching*, no. 3127, August 5, 1925 (tree 20 m.); Chuchow, *L. F. Tsu*, Herb. Univ. Nanking no. 195, June 26, 1920.

Celtis sinensis Persoon, Syn. Pl. I. 292 (1805).—Nakai in Icon. Pl. Koisikav. I. 3, t. 2, fig. II (1911).—Schneider in Sargent, Pl. Wilson. III. 277 (1916).

Chu hwa shan, Hsia ken, *A. N. Steward*, no. 1112, Herb. Univ. Nanking no. 5241, April 22, 1924; Wang shan, alt. 250 m., *R. C. Ching*, no. 2929, July 5, 1925 (tree 20 m. tall); Li shan, Chemen, in open valley, alt. 200 m., *R. C. Ching*, no. 3117, August 5, 1925 (tree 15 m. tall).

Celtis Biondii Pampanini in Nuov. Giorn. Bot. Ital. n. ser. XVII. 252, fig. 3 (1910).

Wu yuan, *K. Ling*, no. 1300, Herb. Univ. Nanking no. 7839, August 21, 1924; Liu yung chen, alt. 250 m., *R. C. Ching*, no. 2880, June 30, 1925 (tree 12 m. tall); Wang shan, open woods, alt. 550 m., *R. C. Ching*, no. 2909, July 5, 1925 (tree 12 m. tall); south Chemen, alt. 260 m., *R. C. Ching*, no. 3197, August 13, 1925 (tree 10 m. tall).

Celtis Julianae Schneider in Sargent, Pl. Wilson. III. 265 (1916).

Chemen, in open wood, alt. 250 m., *R. C. Ching*, no. 3139, August 5, 1925 (tree 16 m. tall).

A handsome and very distinct species with large pubescent and reticulate leaves and large brownish orange fruits on long stout stalks.

Trema cannabina Loureiro, Fl. Coch. 562 (1790).

South Chemen, hillside, alt. 130 m., *R. C. Ching*, no. 3196, August 13, 1925 (bushy shrub, 5 m. tall).

Aphananthe aspera Planch. in De Candolle, Prodr. xvii. 208 (1873).—Shirasawa, Icon. Ess. For. Jap. I. 67, t. 37, fig. 10-20 (1900).

Kimien hsien, *N. K. Ip*, Herb. Univ. Nanking no. 4779, August 22, 1923 (tree 16 m. tall, diam. of trunk 25 cm.); Heh hsien, *K. Ling*, no. 1255, Herb. Univ. Nanking no. 7801, August 14, 1924 (tree 20 m. tall, diam. of trunk 40 cm.); Chu hwa shan, undergrowth, *R. C. Ching*, no. 2706, Herb. Univ. Nanking no. 7633, May 2, 1925 (shrub 2 m. tall); Wang shan, open moist valley, alt. 400 m., *R. C. Ching*, no. 2925, July 5, 1925 (tree 20 m. tall).

MORACEAE

Determined by A. REHDER

Morus alba Linnaeus, Spec. 986 (1753).—Koidzumi in Bull. Imp. Seric. Exp. Sta. Japan. ix. 52, t. 10 (Rev. Gen. Morus) (1917).

Chu hwa shan, cultivated, *R. C. Ching*, no. 2676, Herb. Univ. Nanking no. 7604, May 2, 1925 (tree 8 m. tall).

Morus cathayana Hemsley in Jour. Linn. Soc. xxvi. 456 (1894).

Chu hwa shan, woods, *R. C. Ching*, nos. 2628 and 2698, Herb. Univ. Nanking nos. 7556 and 7626, April 29 and May 2, 1925 (tree 22-28 m. tall).

Morus acidosa Griffith, Not. Pl. As. iv. 388 (1855), "*acidusus*."—Schneider in Sargent, Pl. Wilson. III. 297 (1916).

Morus bombycis Koidzumi in Tokyo Bot. Mag. xxix. 313 (1915); in Bull. Imp. Seric. Exp. Sta. Japan, ix. 32, t. 2, (Rev. Gen. Morus) (1917).

Tien tai, Chu hwa shan, in woods partially shaded, alt. 1220 m., *R. C. Ching*, no. 2792, June 28, 1925 (shrub, about 2 m. tall); Wang shan, undergrowth, alt. 1220 m., *R. C. Ching*, no. 2984, July 12, 1925 (slender shrub 6 m. tall).

The Chinese plant here referred to *M. acidosa* differs somewhat from the typical form from India also found in southern China and Formosa, chiefly in the larger and narrower more caudate-acuminate leaves; it agrees with *M. bombycis* Koidz. and might be distinguished as a variety from typical *M. acidosa*.

Broussonetia Kaempferi Siebold in Verh. Bot. Genoot. xii. 28 (Syn. Pl. Oecon. Jap.) (1830).—Blume, Mus. Bot. Lugd.-Bat. II. 87, t. 40 (1852).

Chu hwa shan, *A. N. Steward*, no. 1121, Herb. Univ. Nanking no. 5250, April 23, 1924; same locality, on rocky banks of streams, *R. C. Ching*, no. 2587, Herb. Univ. Nanking no. 7513, April 28, 1925 (shrub with long slender branches of climbing habit, 10 m. high); Tien-tsi, Chu hwa shan, open rocky banks of streams, alt. 650 m., *R. C. Ching*, no. 2794, June 28, 1925 (bush about 3 m. tall, with long slender branches).

Vanieria tricuspidata Hu in Jour. Arnold Arb. v. 228 (1924).

Cudrania tricuspidata Bureau in Lavallée, Arb. Segrez, 243 (1877).

Cudrania triloba Forbes in Jour. Bot. xxi. 145 (1883).—Oliver in Hooker's Icon. Pl. xviii. t. 1792 (1888).

Pu chu, *N. K. Ip*, Herb. Univ. Nanking no. 5134, August 24, 1923; Wang si chi, south Chu hwa shan, open thickets on hillside, alt. 600 m *R. C. Ching*, no. 2878, June 30, 1925 (shrub with long branches, 6 m. high); Ye hsien, open thickets, alt. 130 m., *R. C. Ching*, no. 3079, July 26, 1925 (small tree or shrub 10 m. tall).

Ficus erecta Thunb. var. *Beecheyana* King in Ann. Bot. Gard. Calcutta, i. pt. ii. 142, t. 178 A (1888).

Ficus Beecheyana Hooker & Arnott, Bot. Voy. Beechey, 271 (1841).

Wu yuan, side of stream, *K. Ling*, no. 1327, Herb. Univ. Nanking no. 7864, August 24, 1924 same locality, open thickets, *R. C. Ching*, nos. 3270 and 3271, August 21, 1925 (shrub 3 m. tall).

Though the extreme forms of *F. Beecheyana* look very distinct from the Japanese *F. erecta* Thunb. on account of their larger and broader, densely pubescent leaves the copious material before me from eastern China shows many intergrading forms, even the three specimens cited above all from the same locality differ from each other in pubescence and shape of leaves, Ling's specimen being quite pubescent with rather large and broad leaves, while Ching's no. 3270 has oblong-lanceolate leaves, pilose only on the midrib and very sparingly on the veins beneath and minutely short-pubescent branchlets and his no. 3270 is intermediate between the two.

Ficus pandurata Hance in Ann. Sci. Nat. ser. 4, xviii. 229 (1862).—King in Ann. Bot. Gard. Calcutta, i. pt. ii. 141, t. 177 B (1888).

Wang shan, Wu Yuan, *K. Ling*, no. 1299, Herb. Univ. Nanking no. 9624, August 21, 1924.

The leaves, though more or less obovate, are not or very slightly panduriform.

Ficus stenophylla Hemsley in Hooker's Icon. xxvi. t. 2536 (1897).

Wang shan, Tao chuang, *K. Ling*, no. 1306, Herb. Univ. Nanking no. 9625, August 22, 1924 (shrub 1 m. tall); Wu yuan, alt. 420 m., *N. K. Ip*, no. 73, Herb. Univ. Nanking no. 7689, August 22, 1924; Kimen, *K. Ling*, 1269, Herb. Univ. Nanking no. 7813, August 18, 1924; south of Chemen, alt. 130 m., *R. C. Ching*, no. 3203, August 13, 1925.

Ling's specimen from Kimen and Ching's specimen are doubtfully re-

ferred here; they have broader oblong-lanceolate or even obovate-lanceolate leaves, but otherwise do not seem to be much different.

Ficus foveolata Wallich, Cat. No. 4493 a-e (1830), nomen.—Miquel in Ann. Mus. Bot. Lugd.-Bat. III. 294 (1867).—King in Ann. Bot. Gard. Calcutta, I. pt. II. 133, t. 167, 168 (1888).

Wang shan, near Mao pung, *A. N. Steward*, no. 1336, Herb. Univ. Nanking no. 7207, August 12, 1924 (shrub 1-2 m. tall).

The leaves of this specimen are rather thinly coriaceous and glabrate beneath and the fruits are 9-10 mm. across, subglobose and pubescent.

Ficus foveolata var. *Henryi* King apud Oliver in Hooker's Icon. XIX. t. 1824 (1889).

Chu hwa shan, *K. Ling*, no. 2028, Herb. Univ. Nanking no. 7293, April 23, 1924 (shrub 1 m. tall), *R. C. Ching*, no. 2674, Herb. Univ. Nanking no. 7602, May 2, 1925; Kimen, alt. 400 m., *N. K. Ip*, no. 46, Herb. Univ. Nanking no. 7670, August 19, 1924.

This variety differs chiefly in its sessile ovoid rather large fruit; the leaves of the specimen cited above are strongly coriaceous and pubescent beneath.

Ficus Baileyi Hutchinson in Bailey, Gent. Herb. I. 19, fig. 4, b, c (1920).

Chu hwa shan, Chi yuen sze, alt. 900 m., *A. N. Steward*, no. 1154, Herb. Univ. Nanking no. 5278, April 25, 1924; Ching yang hsien, *K. Ling*, no. 1126, Herb. Univ. Nanking no. 7716, August 6, 1924; Wang shan, on open rocky cliffs, *R. C. Ching*, no. 3024, July 15, 1925 (climber to 10 m. high); Wu yuan, in woods, alt. 160 m., *R. C. Ching*, no. 3288, August 29, 1925 (climber on Camphor trees, up to 26 m. high).

Ficus pumila Linnaeus, Spec. 1016 (1753).—King in Ann. Bot. Gard. Calcutta, I. pt. II. 124, t. 158 (1888).

Chu hwa shan, Hsia ken, alt. 300 m., *A. N. Steward*, no. 1111, Herb. Univ. Nanking no. 5240, April 22, 1924; I hsien, *K. Ling*, no. 1263, Herb. Univ. Nanking no. 7807, July 15, 1924; Wu yuan an, on open walls or trees, *R. C. Ching*, no. 3276, August 22, 1925 (strong climber, up to 16 m. high).

URTICACEAE

Determined by A. REHDER

Boehmeria nivea Gaudichaud in Freycinet, Voy. Bot. 499 (1826).—Hooker's Jour. Bot. & Kew Gard. Misc. III. 315, t. 8 (1851).

Wang shan, alt. 1200 m., *A. N. Steward*, no. 1331, Herb. Univ. Nanking no. 7202, August 12, 1924; west Chemen, on open rocky banks, alt. 220 m., *R. C. Ching*, no. 3184, August 8, 1925 (shrub 1.75 m. tall).

Villebrunea frutescens Blume, Mus. Bot. Lugd.-Bat. II. 168 (1856).—Weddell in De Candolle, Prodr. XVI. pt. I. 23521 (1869).

Li shan, in shaded ravine, alt. 220 m., *R. C. Ching*, no. 3132, August 5, 1925 (dense shrub, 3 m. tall).

LORANTHACEAE

Determined by A. REHDER

Loranthus caloreas Diels var. *oblongifolius* Lecomte in Not. Syst. III. 49 (1916).

Wang shan, alt. 1200 m., *K. Ling*, no. 1220, Herb. Univ. Nanking no. 7780, August 12, 1924 (epiphytic on *Tsuga chinensis*); south side of Wang shan, alt. 800 m., *R. C. Ching*, no. 3060, July 20, 1925 (epiphytic shrub 1.5 m. tall, on branches of *Pseudotsuga*, fide Ching).

Loranthus yadoriki Siebold apud Maximowicz in Bull. Acad. Sci. St. Pétersb. XXII. 229 (1876); in Mém. Biol. IX. 609 (1877).

Loranthus Jodoniki Siebold apud Siebold & Zuccarini in Abh. Akad. Münch. IV. pt. II. 193 (Fl. Jap. Fam. Nat. I. 85) (1845), nom. nudum.

West of Kweichow City, alt. 130 m., *R. C. Ching*, no. 3342, September 10, 1925 (epiphytic shrub, 2 m. tall, on Oak tree; sterile).

SANTALACEAE

Determined by A. REHDER

Buckleya lanceolata Miquel, Cat. Mus. Bot. Lugd.-Bat. Fl. Jap. 79 (1870).

Ye hsien, margin of wood, alt. 300 m., *R. C. Ching*, no. 3087, July 27, 1925 (slender shrub 4 m. tall).

OLACACEAE

Determined by A. REHDER

Schoepfia jasminodora Siebold & Zuccarini in Abh. Akad. Münch. IV. pt. III. 135 (Fl. Jap. Fam. Nat. II. 11) (1846).

Wang shan, open wood, alt. 550 m., *R. C. Ching*, no. 2915, July 5, 1925 (small tree 12 m. tall).

CERCIDIPHYLLACEAE

Determined by A. REHDER

Cercidiphyllum japonicum var. *sinense* Rehder & Wilson in Sargent, Pl. Wilson. I. 316 (1913).

Cercidiphyllum japonicum Chun, Chin. Econ. Trees, 134, t. 51 (1923).—Non Siebold & Zuccarini.

Chang gon shan, Wu yuan, wooded ravine, *R. C. Ching*, no. 3244, August 17, 1925 (tree 14 m. tall).

RANUNCULACEAE

Determined by A. REHDER

Clematis heracleifolia DC. var. *ichangensis* Rehder & Wilson in Sargent, Pl. Wilson. I. 321 (1913).

Wang shan, on grassy foot-hill, alt. 1200 m., *R. C. Ching*, no. 3032, July 15, 1925 (low shrub 0.5 m. tall).

Clematis florida Thunberg, Fl. Jap. 240 (1784).—A. Henry in Gard. Chron. ser. 3, xxxii. 51, fig. 20 (1902).

South of Tatung, along path near cultivated field, *R. C. Ching*, no. 2707, May 3, 1925; without locality, *R. C. Ching*, no. 2731, in 1925.

Clematis montana Buchanan-Hamilton apud De Candolle, Syst. i. 164 (1818).—Wallich, Pl. As. Rar. iii. t. 217 (1832).—Lindley in Bot. Reg. xxvi. t. 53 (1840).

Tien tai, Chu hwa shan, open thickets, *R. C. Ching*, no. 2787, June 28, 1925 (climber to 7 m. high); Wang shan, in woods, alt. 1350 m., *R. C. Ching*, no. 3045, July 17, 1925 (climber up to 10 m. tall).

Clematis uncinata Champion in Hooker's Jour. Bot. & Kew Gard. Misc. iii. 255 (1851).

Clematis leiocarpa Oliver in Hooker's Icon. xvi. t. 1533 (1886).

Wang shan, in open thickets, alt. 550 m., *R. C. Ching*, no. 2938, July 11, 1925 (climber to 12 m. high); Ye hsien, open thickets, alt. 400 m., *R. C. Ching*, no. 3072, July 21, 1925.

Clematis Pavoliniana Pampanini in Nuov. Giorn. Bot. Ital. n. ser. xvii. 270 (1910).—Sprague in Bot. Mag. cxlii. t. 8655 (1916).

Chu hwa shan, thickets, *R. C. Ching*, no. 2704, May 2, 1925 (evergreen climber to 13 m. high).

Clematis chinensis Retzius, Observ. II. 18, no. 53, t. 2 (1781).

West gate of Kweichow city, partially shaded thickets, alt. 100 m., *R. C. Ching*, no. 3340, September 10, 1925 (dense climber to 10 m. high).

Clematis grata Wall. var. *grandidentata* Rehder & Wilson, in Sargent, Pl. Wilson. i. 338 (1913).

Chu hwa shan, open thickets, *R. C. Ching*, no. 2774, June 27, 1925; without locality, *R. C. Ching*, no. 4017, in 1925.

Clematis brevicaudata DC. var. *lissocarpa* Rehder & Wilson in Sargent, Pl. Wilson. i. 340 (1913).

South side of Wang shan, woods, alt. 1200 m., *R. C. Ching*, no. 3070, July 20, 1925 (climbing on trees, 10 m. high); Li shan, northwest Chemen, woods, alt. 200 m., *R. C. Ching*, no. 3148, August 6, 1925 (slender climber); Chang gon shan, Wu yuan, alt. 900 m., *R. C. Ching*, no. 3233, August 17, 1925 (climber, 10 m. high).

Clematis Henryi Oliver in Hooker's Icon. xix. t. 1819 (1889).

Chu hwa shan, undergrowth, *R. C. Ching*, no. 2658, May 1, 1925 (climber, every joint producing roots).

LARDIZABALACEAE

Determined by A. REHDER

Decaisnea Fargesii Franchet in Jour. de Bot. vi. 234 (1892).—Hooker f. in Bot. Mag. cxxviii. t. 7848 (1902).

Wang shan, wooded ravine, alt. 1000 m., *R. C. Ching*, no. 2948, July 12, 1925 (many-stemmed shrub to 6 m. tall).

Holboellia coriacea Diels in Bot. Jahrb. xxix. 342 (1900).

Chu hwa shan, shrubby roadside, *R. C. Ching*, no. 2611, Herb. Univ. Nanking no. 7536, April 29, 1925 (evergreen climber to 10 m. high); Wang shan, alt. 1000 m., *R. C. Ching*, no. 2953, July 12, 1925 (climber 10 m. high).

Akebia trifoliata Koidzumi in Tokyo Bot. Mag. xxxix. 310 (1925).

Clematis trifoliata Thunberg in Trans. Linn. Soc. ii. 337 (1794).

Akebia lobata Decaisne in Arch. Mus. Paris, i. 196, t. 13 b (1839).—Hooker f. in Bot. Mag. cxxii. t. 7485 (1896).

Chu hwa shan, woods or exposed places, *R. C. Ching*, no. 2585, Herb. Univ. Nanking no. 7511, April 28, 1925 (climbing on trees, 10 m. high); Li shan, northwest Chemen, open woods, alt. 300 m., *R. C. Ching*, no. 3143, August 6, 1925 (climbing on trees, 10 m. high).

Akebia quinata Decaisne in Arch. Mus. Paris, i. 195 t. 13 a (1839).—Hooker in Bot. Mag. lxxxix. t. 4864 (1855).

Wang shan, T'ang kou to Kang chuen, alt. 800 m., *N. K. Ip*, no. 23, Herb. Univ. Nanking no. 7652, August 14, 1924; Ye hsien, woods or open thickets, alt. 350 m., *R. C. Ching*, no. 3075, July 21, 1925 (climber, 15 m. high).

SARGENTODOXACEAE

Determined by A. REHDER

Sargentodoxa cuneata Rehder & Wilson in Sargent, Pl. Wilson. i. 351 (1913).—Stapf in Bot. Mag. cli. t. 9111, 9112 (1926).

Wang shan, alt. 1000 m., *A. N. Steward*, no. 1261, Herb. Univ. Nanking no. 5500, August 9, 1924; same locality, alt. 700 m., *R. C. Ching*, no. 2969, July 12, 1925 (twining climber 20 m. high).

BERBERIDACEAE

Determined by A. REHDER

Nandina domestica Thunberg, Fl. Jap. 9 (1784).—Sims in Bot. Mag. xxviii. t. 1109 (1808).

Wang shan, undergrowth in ravines, alt. 550 m., *R. C. Ching*, no. 2900, July 5, 1925 (shrub, 1.2 m. tall), *Y. M. Kwok*, no. 4, Herb. Univ. Nanking no. 12085, Nov. 27, 1925.

Berberis Henryana Schneider in Bull. Herb. Boissier, sér. 2, v. 664 (1905); in Sargent, Pl. Wilson. iii. 440 (1917).

Wang shan, alt. 1850 m., *K. Ling*, nos. 1177, 1192, Herb. Univ. Nanking nos. 7750 and 7756, August 11, 1924; Wang shan, below Sz tz ling, alt. 1700 m., *A. N. Steward*, no. 1313, Herb. Univ. Nanking no. 7184, August 12, 1924; same locality, back of Lion Ridge, in dense woods near ridge, alt. 1300 m., *R. C. Ching*, no. 2981, July 12, 1925 (spreading shrub, 6 m. tall).

The specimens cited above differ from the type in the gray or yellowish often somewhat grooved branches.

***Berberis* sp.**

Chang gon shan, Wu yuan, thickets in ravine, *R. C. Ching*, no. 3248, August 17, 1925 (shrub, 1 m. tall).

This belongs to the *Wallichianae* group, but it does not agree with any of the species of this group known to me. The leaves are elliptic-lanceolate to oblanceolate, up to 4.5 cm. long, with only 1-4 small nearly upright teeth on each side, thinly coriaceous with the lateral veins visible beneath, covered when young with glaucous bloom which later partly disappears; young fruits ellipsoid, bloomy, on pedicels about 1 cm. long in many-flowered fascicles.

It is probably a new species, but as neither mature fruits nor flowers are available, I hesitate to describe it.

Mahonia Bealii Carrière in *Fl. des Serr.* x. 166 (1754-55).—Takeda in *Not. Bot. Gard. Edinb.* vi. 225, t. 12, 13, 34, fig. 83-103 (1917).

Huang lien, Tai ping hsien, *A. J. Bowen*, no. 2, Herb. Univ. Nanking no. 12083, November 28, 1925.

MENISPERMACEAE

Determined by A. REHDER

Cocculus trilobus De Candolle, *Syst.* i. 522 (1818).—Diels in Engler, *Pflanzenr.* iv-94, 232, fig. 78 a-l (1910).

Cocculus Thunbergii De Candolle, *Syst.* i. 524 (1818).

Tze kuan sze, Wang shan, alt. 1100 m., *A. N. Steward*, no. 1275, Herb. Univ. Nanking no. 7147, August 11, 1924; Liu chu wan, on the way to Chu wang shan, alt. 250 m., along moist roadside, *R. C. Ching*, no. 2738, June 25, 1925 (trailing or climbing to 1.75 m. high).

Sinomenium acutum Rehder & Wilson in Sargent, *Pl. Wilson.* i. 387 (1913).

Sinomenium diversifolium Diels in Engler, *Pflanzenr.* iv-94, 254 (1910).—Hemsley in *Gard. Chron.* ser. 3, LII. 402, fig. 178 (1912).

Wangsi che, south Chu hwa shan, alt. 600 m., open thickets, *R. C. Ching*, no. 2842, June 29, 1925 (twining climber, 10 m. high).

Menispermum dauricum De Candolle, *Syst.* i. 540 (1818).—Sargent in *Gard. & Forest*, v. 234, fig. 42 (1892).

North foot of Chu hwa shan, alt. 300 m., moist bushy hillside, *R. C. Ching*, no. 2760, June 25, 1925 (twining climber, to 13 m. high).

MAGNOLIACEAE

Determined by E. H. WILSON

Magnolia denudata Desrousseaux in Lamarck, Encycl. Méth. Bot. iii. 675 (1791).—Rehder & Wilson in Sargent, Pl. Wilson. i. 399 (1913), where full citations of literature and synonymy are given.

Magnolia conspicua Salisbury, Parad. Lond. i. t. 38 (1806).

Magnolia Yulan Desfontaines, Hist. Arb. iii. 6 (1809).

Chu hwa shan, woods, *R. C. Ching*, no. 2617, Herb. Univ. Nanking no. 7542, April 29, 1925, (tree 20 m. tall, girth of trunk 1.5 m. bark brownish gray, flowers white, tinged purplish at base, fragrant; very common); same locality, alt. 600 m., *R. C. Ching*, no. 2865, June 30, 1925, (tree 20 m. tall, girth of trunk 2.6 m.).

Magnolia cylindrica Wilson, spec. nov.

Arbor vel frutex, 6–10 m. altus; ramuli graciles, juveniles sericei, maturi laeves, intense purpureo-brunnei; gemmae parvae, ovoideae, acutae, pilis cinereis lanuginosis vel flavo-cinereis villosis vestitae. Folia membranacea, decidua, longe petiolata petiolo gracili sericeo 8–20 mm. longo, oblanceolato-oblonga vel oblongo-lanceolata, rarius oblongo-obovata, 6–14 cm. (pleraque 8–10 cm.) longa et 2–5 cm. (pleraque 3–4 cm.) lata, obtusa vel subacuta, basi cuneata, rarius rotundata, intense viridia, supra glabra et reticulata, subtus pallidiora et glabrescentia. Flores non visi. Fructus cylindricus, 5–7.5 cm. longus et 2–2.5 cm. diam.; carpella numerosa, lignea, laevia, leviter verruculosa, pleraque disperma seminibus parvis; pedunculus dense cinereo-villosus, 0.5–1 cm. longus.

Wang shan, alt. 1150 m., shady ravine, *R. C. Ching*, no. 2949, type, July 12, 1925; same locality, alt. 1,400 m., *R. C. Ching*, no. 2994, July 13, 1925; same locality, alt. 1,350 m., *K. Ling*, no. 1150, Herb. Univ. Nanking no. 7730, August 9, 1924.

This very distinct new species is well distinguished by its thin, narrow, prominently reticulated leaves, by its slender petioles, and by its cylindric fruits. It is most closely related to the Japanese *M. salicifolia* Maxim. which has rather larger leaves usually acuminate and glaucescent on the under side, glabrous winter buds and branchlets, and a smaller, much less cylindric fruit. The flowers of our new species are unknown but they appear before the leaves. The foliage is deciduous and the wood when cut has a spicy fragrance similar to that of *M. salicifolia* Maxim. and *M. kobus* DC.

Magnolia parviflora Siebold & Zuccarini in Abh. Akad. Münch. iv. pt. ii. 187 (Fl. Jap. Fam. Nat. i. 79) (1843).—Hooker f. in Bot. Mag. cxxi. t. 7411 (1895).—Rehder & Wilson in Sargent, Pl. Wilson. i. 406 (1913).

Wang shan, back of Lion Ridge, alt. 1400 m., *R. C. Ching*, nos. 2975, 2979 and 3035, July 12 and 15, 1925 (shrub 8–9 m. tall; common, in partially shaded ravines).

Heretofore known only from Japan and Korea this species of *Magnolia* is an interesting addition to the Chinese flora. The material is ample, consisting of good leaf specimens bearing flowers and unripe fruit. The leaves are less prominently villose on the under surface and their texture is thinner than is usual in Japanese and Korean specimens but I can find no other difference. This extension of range is unusual in this genus.

Magnolia officinalis var. *biloba* Rehder & Wilson in Sargent, Pl. Wilson. i. 392 (1913).

Wang shan, Mao pung, alt. 1100 m., in Bamboo forest, *K. Ling*, no. 1165, Herb. Univ. Nanking no. 7740, August 9, 1924, (tree 6 m. tall, girth of trunk 0.3 m., bark smooth).

The bilobed character of the leaves in this *Magnolia* is both constant and remarkable.

Michelia figo Sprengel, Syst. II. 643, (1825).

Liriodendron figo Loureiro, Fl. Cochinch. 347 (1790).

Magnolia fuscata Andrews, Bot. Repos. iv. t. 229 (1802).

Michelia fuscata Blume, Fl. Jav. Magnol. 8 (1828).

Wu yuan, *K. Ling*, no. 1345, Herb. Univ. Nanking no. 7878, August 25, 1924, (bush 8 m. tall, flowers aromatic).

Kadsura peltigera Rehder & Wilson in Sargent, Pl. Wilson. i. 410 (1913).

Li kan, west Chemen, alt. 100 m., *R. C. Ching*, no. 3159, April 7, 1925, (climber 10 m. tall, flowers greenish yellow, common); Wu yuan, border of stream, *K. Ling*, no. 1328, Herb. Univ. Nanking no. 7865, August 24, 1924 (climber 8 m. tall, flowers yellowish); Ching yang hsien, *K. Ling*, no. 1125, Herb. Univ. Nanking no. 7715, August 6, 1924 (climber, flowers light yellow); Kimen, *N. K. Ip*, no. 40, Herb. Univ. Nanking no. 7665 August 19, 1924 (climber, flowers yellow, fragrant).

Schisandra sphenanthera Rehder & Wilson in Sargent, Pl. Wilson. i. 414 (1913).

Li kan, west Chemen, alt. 230 m., *R. C. Ching*, no. 3166, August 7, 1925 (climber 13 m. tall, fruit greenish, turning bright red; common), Chu hwa shan, *R. C. Ching*, no. 2591, April 28, 1925; Wang shan, alt. 1500 m., *R. C. Ching*, no. 3008, July 15, 1925 (a trailing vine, 5 m. long, flowers dark purple).

Illicium Henryi Diels in Bot. Jahrb. xxix. 323 (1900).—Rehder & Wilson in Sargent, Pl. Wilson. i. 417 (1913).

Without precise locality, *R. C. Ching*, no. 2519, in 1925.

CALYCANTHACEAE

Determined by A. REHDER

Meratia praecox Rehder & Wilson in Sargent, Pl. Wilson. i. 419 (1913).

Calycanthus praecox Linnaeus, Spec. ed. 2, 718 (1762).—Curtis in Bot. Mag. xiii. t. 466 (1799).

Chimonanthus fragrans Lindley in Bot. Reg. vi. t. 451 (1820).

Heh hsien, *K. Ling*, no. 1260, Herb. Univ. Nanking no. 7804, August 15, 1924; Ye hsien, woods, in partial shade, alt. 300 m., *R. C. Ching*, no. 3088, July 27, 1925 (shrub 5 m. tall); Su hsien, alt. 500 m., *R. C. Ching*, no. 3092, July 27, 1925 (shrub 6.5 m. tall).

LAURACEAE

Determined by A. REHDER

Cinnamomum Camphora Fr. Nees von Esenbeck & Ebermaier, Handb. Med. Pharm. Bot. II. 430 (1831).

Camphora officinarum C. G. Nees von Esenbeck in Wallich, Pl. As. Rar. II. 72 (1831).

Li kau, west Chemen, alt. 100 m., *R. C. Ching*, no. 3149, August 7, 1925 (tree 15 m. tall).

Cinnamomum spec.

Wang shan, Yuen ku sze, alt. 1200 m., *K. Ling*, no. 1222, Herb. Univ. Nanking no. 7782, August 12, 1924 (tree 5 m. tall); Chemen, alt. 100 m., *R. C. Ching*, no. 3169, August 8, 1925 (tree 8 m. tall).

The specimens resemble *C. argenteum* Gamble, but the young branchlets, petioles and the inflorescence are covered with a fine silky pubescence.

Phoebe Sheareri Gamble in Sargent, Pl. Wilson, II. 72 (1914).

Machilus Sheareri Hemsley in Jour. Linn. Soc. XXVI. 377 (1891).

Li shan, northwest Chemen, alt. 230 m., *R. C. Ching*, no. 3147, August 6, 1925 (tree 9 m.).

Machilus Thunbergii Siebold & Zuccarini in Abh. Akad. Münch. IV. pt. III. 202 (Fl. Jap. Fam. Nat. II. 78) (1846).

Kimien, *N. K. Ip*, no. 43, Herb. Univ. Nanking no. 7668, and *K. Ling*, no. 1281, Herb. Univ. Nanking no. 7823, August 19, 1924.

Machilus ichangensis Rehder & Wilson in Sargent, Pl. Wilson. II. 621 (1916).

Machilus Thunbergii Hemsley in Jour. Linn. Soc. XXIII. 378 (1891), pro parte; Hooker's Icon. XXVI. t. 2538 (1897).—Non Siebold & Zuccarini.

Kimien hsien, *K. Ling*, no. 1278, Herb. Univ. Nanking no. 7820, August 19, 1924, (tree 10 m. tall); Chemen, alt. 260 m., *R. C. Ching*, no. 3176, August 8, 1925 (tree 13 m. tall).

Ching's no. 3176 has unusually large leaves up to 27 cm. long.

Sassafras tzumu Hemsley in Kew Bull. Misc. Inform. 1907, 55; in Hooker's Icon. XXIX. t. 2833 (1907).

Pseudosassafras Tzumu Lecomte, Not. Syst. II. 269 (1912).

Chu hwa shan, *R. C. Ching*, no. 2597, Herb. Univ. Nanking no. 7522, April 28, 1925 (tree 17 m. tall); Tai ping hsien, alt. 200 m., *R. C. Ching*, no. 2886, July 3, 1925 (tree 17 m. tall).

Litsea elongata Hooker f., Fl. Brit. Ind. v. 165 (1886).

Daphnidium elongatum C. G. Nees von Esenbeck in Wallich, Pl. As. Rar. II. 63 (1831).

Wang shan, *K. Ling*, no. 1233, Herb. Univ. Nanking, no. 7787, August 12, 1924; same locality, alt. 600–800 m., *R. C. Ching*, nos. 2935 and 2966, July 11 and 12, 1925; Chang gon shan, west Wu yuan, *R. C. Ching*, no. 3217, August 16, 1925.

Litsea glauca Siebold in Verh. Batav. Genootsch. xii. 24 (Syn. Pl. Oecon.) (1830); Meisner in De Candolle, Prodr. xv. pt. i. 224 (1864).

Wang shan, alt. 1550 m., *A. N. Steward*, no. 1295, Herb. Univ. Nanking no. 7166, August 11, 1924.

Litsea chinensis Blume, Bijdr. 565 (1825).

Actinodaphne chinensis Nees von Esenbeck, Syst. Laur. 600 (1836).

Pu chu, alt. 300 m., *N. K. Ip*, Herb. Univ. Nanking no. 4778, August 18, 1923 (tree 20 m. tall); Wu yuan, *K. Ling*, nos. 1321 and 1346, Herb. Univ. Nanking nos. 7859 and 7879, August 24, 25, 1924; Chu hwa shan, *R. C. Ching*, no. 2633, Herb. Univ. Nanking no. 7561, April 30, 1925; Wang shan, alt. 1500 m., *N. K. Ip*, Herb. Univ. Nanking no. 7288, August 28, 1923, *K. Ling*, no. 1160 and 1196, Herb. Univ. Nanking nos. 7735 and 7760, August 9 and 11, 1924; same locality, alt. 530 m., *R. C. Ching*, no. 2922, July 5, 1925; Wang si chu, Chu hwa shan, *R. C. Ching*, no. 2843, June 29, 1925; north Li kan, Chemen, alt. 100 m., *R. C. Ching*, no. 3154, August 7, 1925 (tree 16 m. tall); south Chemen, alt. 300 m., *R. C. Ching*, no. 3205, August 13, 1925 (tree 28 m. tall).

Litsea cubeba Persoon, Syn. ii. 4 (1807).

Litsea citrata Blume, Bijdr. 565 (1825).

Wang shan, *N. K. Ip*, Herb. Univ. Nanking no. 4770, August 28, 1923, *K. Ling*, no. 1174, Herb. Univ. Nanking no. 7747, August 11, 1924; same locality, alt. 600 m., *R. C. Ching*, no. 2942, July 12, 1925 (shrub 5 m. tall); Tien tai shan, Chu hwa shan, *A. N. Steward*, no. 1170, Herb. Univ. Nanking no. 5292, April 25, 1924; same locality, alt. 1150 m., *R. C. Ching*, no. 2823, June 28, 1925 (shrub 6 m. tall); west Chemen, alt. 2600 m., *R. C. Ching*, no. 3171, August 8, 1925.

Benzoin praecox Siebold & Zuccarini in Abh. Akad. Münch. iv. pt. iii. 205 (Fl. Jap. Fam. Nat. ii. 81) (1846).

Lindera praecox Blume, Mus. Bot. Lugd.-Bat. i. 324 (1850).—Shirasawa Icon. Ess. For. Jap. ii. t. 19, fig. 1–10 (1900).

Without precise locality, *R. C. Ching*, no. 5081, in 1925.

This Japanese species has not been recorded before from China where it seems rare, since the specimen cited above is the only one seen.

Benzoin glaucum Siebold & Zuccarini in Abh. Akad. Münch. iv. pt. iii. 205 (Fl. Jap. Fam. Nat. ii. 81) (1846).

Lindera glauca Blume, Mus. Bot. Lugd.-Bat. i. 325 (1850).

Chuchow, *L. F. Tsu*, Herb. Univ. Nanking no. 1676, June 25, 1920; Wang shan, alt. 1000 m., *N. K. Ip*, Herb. Univ. Nanking no. 4766, August 28, 1923; 60 li north of Chu hwa shan, *R. C. Ching*, no. 2711, Herb. Univ. Nanking no. 7625, May 2, 1925 (shrub 6 m. tall); Wang si

che, south Chu hwa shan, alt. 550 m., *R. C. Ching*, no. 2871, June 30, 1925 (shrub 6.5 m. tall).

Benzoin grandifolium Rehder in Jour. Arnold Arb. i. 145 (1919).

Lindera megaphylla Hemsley in Jour. Linn. Soc. xxvi. 388 (1891).

Chemen, alt. 230, m., *R. C. Ching*, no. 3129, August 5, 1925.

Benzoin reflexum Rehder in Jour. Arnold Arb. i. 145 (1919).

Lindera reflexa Hemsley in Jour. Linn. Soc. xxvi. 391 (1891).

Wang shan, slope, *N. K. Ip*, Herb. Univ. Nanking no. 4785, August 28, 1923; same locality, alt. 1350 m., *K. Ling*, no. 1151, Herb. Univ. Nanking no. 7731, August 9, 1924; same locality, foot of mountain, *K. Ling*, no. 1199, Herb. Univ. Nanking no. 7762, August 11, 1924; Chu hwa shan, *R. C. Ching*, no. 2627, April 29, 1925; on the way to Chu hwa shan, *R. C. Ching*, no. 2746, June 25, 1925 (shrub 3 m. tall, fruit bright red); Tien tai, Chu hwa shan, alt. 1150 m., *R. C. Ching*, no. 2820, June 28, 1925; Li shan, northwest Chemen, alt. 550 m., *R. C. Ching*, no. 3119, August 5, 1925 (shrub 3 m. tall, fruit bright red).

Benzoin rubronervium Rehder in Jour. Arnold Arb. i. 145 (1919).

Lindera rubronervia Gamble in Sargent, Pl. Wilson. ii. 84 (1914).

Wang si che, south Chu hwa shan, alt. 600 m., *R. C. Ching*, no. 2873, June 30, 1925.

Benzoin cercidifolium Rehder in Jour. Arnold Arb. i. 144 (1919).

Lindera cercidifolia Hemsley in Jour. Linn. Soc. xxvi. 387 (1891).

Wang shan, alt. 1350 m., *K. Ling*, no. 1200, Herb. Univ. Nanking, no. 7763, August 11, 1924 (shrub 3 m. tall); Tien tai, Chu hwa shan, alt. 1200 m., *R. C. Ching*, no. 2821, June 28, 1925 (shrub 8 m. tall); Chang gon shan, Wu yuan, alt. 1150 m., *R. C. Ching*, no. 3236, August 17, 1925 (shrub 12 m. tall; fruit shining black).

Benzoin strychnifolium Kuntze, Rev. Gen. ii. 569 (1891).

Lindera strychnifolia Fernandez-Villar in Blanco, Fl. Filip. ed. 3, Nov. App. 182 (1880).

Kimien, alt. 450 m., *N. K. Ip*, no. 45, Herb. Univ. Nanking no. 7669, August 19, 1924; Chu hwa shan, *A. N. Steward*, no. 1184, Herb. Univ. Nanking no. 5301, April 25, 1924, *R. C. Ching*, no. 2609, Herb. Univ. Nanking no. 7534, April 28, 1925 (shrub 5 m. tall), no. 2768, June 26, 1925 (shrub 5 m. tall).

SAXIFRAGACEAE

Determined by A. REHDER

Philadelphus pekinensis Ruprecht in Bull. Phys.-Math. Acad. Sci. St. Pétersb. xv. 365 (1857); in Mém. Biol. ii. 543 (1858).

Philadelphus coronarius ζ *pekinensis* Maximowicz in Mém. Acad. Sci. St. Pétersb. sér. 7, x, no. xvi. 42 (1867).

Wang shan, alt. 280 and 1350 m., *R. C. Ching*, nos. 2923 and 3005, July 5 and 15, 1925.

Philadelphus sericanthus Koehne var. *Rehderianus* Koehne in Fedde, Rep. Nov. Spec. x. 127 (1911).

Heh hsien, *K. Ling*, no. 1259, Herb. Univ. Nanking no. 7803, August 14, 1924.

Deutzia ningpoensis Rehder in Sargent, Pl. Wilson. i. 17 (1911).

Tien tai, Chu hwa shan, alt. 900 m., *R. C. Ching*, no. 2793, June 28, 1925; Wang shan, alt. 1200 m., *R. C. Ching*, no. 2983, July 12, 1925 (shrub 6 m. tall).

Deutzia spec.

Chu hwa shan, alt. 600 m., *R. C. Ching*, nos. 2657 (Herb. Univ. Nanking no. 7585), 2784, 2834 and 3001, May 1, June 27 and 28 and July 13, 1925.

The specimens cited above seem to be closely related to *D. paniculata* Nakai, according to the description, but as flowers are lacking the specimens having partly very young flower buds and partly fruit, I hesitate to identify it with that Korean species of which I have seen no specimens.

Hydrangea umbellata Rehder in Sargent, Pl. Wilson. i. 25 (1911).

Wang shan, *K. Ling*, no. 1188, Herb. Univ. Nanking no. 7753, August 11, 1924; same locality, alt. 600 and 1200 m., *R. C. Ching*, nos. 2944 and 2954, July 12, 1925 (shrub 1.5 m. tall); Tien tai, Chu hwa shan, alt. 1200 and 900 m., *R. C. Ching*, nos. 2786 and 2829b, June 28, 1925 (shrub 3-4 m. tall).

Ching's no. 2954 differs in its deeply dentate sepals and smaller and comparatively broader leaves.

Hydrangea paniculata Siebold in Nov. Act. Leop.-Carol. xiv. pt. ii. 690 (Syn. Hydrang.) (1829).—Siebold & Zuccarini, Fl. Jap. i. 115, t. 61 (1840).

Wu yuan, alt. 800 m., *N. K. Ip*, no. 52, Herb. Univ. Nanking no. 7675, August 19, 1924; Kimen, *K. Ling*, no. 1274, Herb. Univ. Nanking no. 7816, August 18, 1924; Wang shan, *K. Ling*, no. 1208, Herb. Univ. Nanking no. 7769, August 12, 1924; Chu hwa shan, alt. 600 m., *R. C. Ching*, no. 2808, June 28, 1925.

Hydrangea strigosa Rehder in Sargent, Pl. Wilson. i. 31 (1911).

Wang shan, alt. 250 m., *A. N. Steward*, no. 1344, Herb. Univ. Nanking no. 7215, August 14, 1924.

Hydrangea strigosa var. *macrophylla* Rehder in Sargent, Pl. Wilson. i. 32 (1911).

Hydrangea aspera var. *macrophylla* Hemsley in Jour. Linn. Soc. xxiii. 273 (1887).

Shi teh hsien, at foot of mountain, *K. Ling*, no. 1132, Herb. Univ. Nanking no. 7721, August 7, 1924; Chemen, alt. 230 m., *R. C. Ching*, no. 3130, August 5, 1925.

Schizophragma integrifolium Oliv. var. *denticulatum* Rehder in Sargent, Pl. Wilson, I. 42 (1911).

Chu hwa shan, rocky cliff, *R. C. Ching*, no. 2685, May 2, 1925 (climber 20 m. high); Wang si che, south Chu hwa shan, rocky cliffs, alt. 600 m., *R. C. Ching*, no. 2850, June 29, 1925 (climber 18 m. high); Wang shan, in woods, alt. 950 m., *R. C. Ching*, no. 3002, July 13, 1925 (climber 14 m.).

Pileostegia viburnoides Hooker & Thomson in Jour. Linn. Soc. II. 76, t. 2 (1858).

South Siunin, alt. 130 m., *R. C. Ching*, no. 3322, September 7, 1925 (climber 14 m. high).

Itea chinensis Hooker & Arnott, Bot. Voy. Beechey, 188, t. 39 (1841).

Tsin yung, alt. 200 m., *R. C. Ching*, no. 2894, July 3, 1925 (slender shrub 6 m. tall); south Siunin, alt. 300 m., *R. C. Ching*, no. 3325, September 7, 1925 (shrub 6 m. tall).

Ribes tenue Janczewski in Bull. Acad. Sci. Cracovie Cl. Sci. Nat. 1906, p. 290 (Spec. Gen. *Ribes*, III. 11); in Mém. Soc. Phys. Hist. Nat. Genève xxxv. 463 (Monog. Groseill.) (1907).

Tien tai shan, Chu hwa shan, alt. 1500 m., *A. N. Steward*, no. 1163, Herb. Univ. Nanking no. 5286, April 25, 1924.

Ribes tenue typically has red-brown flowers but the flowers (staminate) of Steward's specimen are greenish according to the collector.

PITTOSPORACEAE

Determined by E. H. WILSON

Pittosporum glabratum Lindley in Jour. Hort. Soc. London, I. 230 (1846).—Hemsley in Jour. Linn. Soc. xxiii. 58 (1886).

Pittosporum Fortunei Turczaninow in Bull. Soc. Nat. Moscou, xxxvi, pt. I. 562 (1863).

Wang shan, alt. 600 m., ravines, *R. C. Ching*, no. 2904, July 5, 1925 (bush 1.5 m. high); same locality, *N. K. Ip*, Herb. Univ. Nanking nos. 7656 and 5137, August 14 and 28, 1923; *A. N. Steward*, no. 1252, Herb. Univ. Nanking no. 5491, August 9, 1924; west Chemen, alt. 160 m., *R. C. Ching*, no. 3183, August 8, 1925 (bush 1.5 m. high); Chu hwa shan, *R. C. Ching*, no. 2695, Herb. Univ. Nanking no. 7623, May 2, 1925.

HAMAMELIDACEAE

Determined by E. H. WILSON

Liquidambar formosana Hance in Ann. Sci. Nat. ser. 5, v. 215 (1866); Oliver in Hooker's Icon. xi. 14, t. 1020 (1867-1871).—Rehder & Wilson in Sargent, Pl. Wilson, I. 421 (1913).

Liquidambar acerifolia Maximowicz in Bull. Acad. Sci. St. Petersburg, x. 486 (1866).

Liquidambar Maximowiczii Miquel in Ann. Mus. Lugd.-Bat. III. 200 (1877).

Chu hwa shan, woods, *R. C. Ching*, no. 2581, Herb. Univ. Nanking no. 7507, May 1, 1925 (tree 30 m. tall, girth of trunk 0.75 m.); Wang

shan, *K. Ling*, no. 1167, Herb. Univ. Nanking no. 7742, August 9, 1924 (tree 20 m. tall, girth of trunk 1.5 m.); Wu yuan, side of stream, *K. Ling*, no. 1317, Herb. Univ. Nanking no. 7855, August 24, 1924 (tree 20 m. tall, girth of trunk 1.8 m.); Kien ping, without collector's name, Herb. Univ. Nanking no. 1597, Sept. 3.

Distylium myricoides, Hemsley in Hooker's Icon. xxix. sub t. 2835 (1907).

Wang shan, open thickets, alt. 800 m., *R. C. Ching*, no. 3026, July 15, 1925 (shrub 10 m. high; common).

Sycopsis sinensis Oliver in Hooker's Icon. xx. t. 1931 (1890).—Hemsley in Hooker's Icon. xxix. t. 2834, fig. 1-3 (1907).

West Wu yuan, alt. 1000 m., in woods, *R. C. Ching*, no. 3250, August 17, 1925 (tree 15 m. tall, girth of trunk 1.2 m., rare).

Corylopsis sinensis Hemsley in Gard. Chron. ser. 3, xxxix. 18, fig. 12 (1906); in Hooker's Icon. xxix. t. 2820, fig. 17-20 (1906).

Chu hwa shan, scrub clad slopes, *R. C. Ching*, no. 2598, Herb. Univ. Nanking no. 7523, April 28, 1925 (bush 5 m. high, flowers pale yellow, common); Wang si che, south Chu hwa shan, alt. 650 m., *R. C. Ching*, no. 2849, June 29, 1925 (shrub 8 m. tall, common); Chi yuen sze, Chu hwa shan, alt. 1000 m., *A. N. Steward*, no. 1132, Herb. Univ. Nanking no. 5261, April 24, 1924 (bush 5 m. high).

Corylopsis Veitchiana Bean in Bot. Mag. cxxxvi. t. 8349 (1910).

Wang shan, alt. 800 m., woods, *R. C. Ching*, no. 2965, July 12, 1925 (bush 10 m. high; common); without locality, *R. C. Ching*, no. 2728, in 1925 (flowering branches).

Corylopsis platypetala Rehder & Wilson in Sargent, Pl. Wilson. i. 426 (1913).

Wang shan, alt. 860 m., wooded ravine, *R. C. Ching*, no. 3064, July 20, 1925 (bush 8 m. high, common); same locality, woods and thickets, *K. Ling*, nos. 1161 and 1217, Herb. Univ. Nanking nos. 7736 and 9615, August 9, 12, 1924 (very common).

Fortunearia sinensis Rehder & Wilson in Sargent, Pl. Wilson. i. 428 (1913).—Rehder in Jour. Arnold Arb. v. 166 (1924).

Chu hwa shan, in woods, *R. C. Ching*, no. 2647, Herb. Univ. Nanking no. 7575, May 1, 1925 (tree 15 m. tall, girth of trunk 0.9 m.; rare); Wang shan, alt. 750 m., woods, *R. C. Ching*, no. 2970, July 12, 1925 (tree 13 m. tall, girth of trunk 0.7 m.; common); Bau hwa shan, *A. N. Steward*, Herb. Univ. Nanking no. 2147, June 7, 1922; Chuchow, without collector's name, Herb. Univ. Nanking, no. 362, June 26, 1920.

Loropetalum chinense Oliver in Trans. Linn. Soc. xxiii. 459, fig. 4 (1862).—Hemsley in Bot. Mag. cxxx. t. 7979 (1904).

Hamamelis chinensis R. Brown in Abel, Narr. Jour. China, 376, fig. (1818).

Wang shan, alt. 330 m., thickets, *R. C. Ching*, no. 3056, July 20, 1925 (bush 11 m. high, very common); same locality, alt. 1200 m., *K. Ling* no. 1216, Herb. Univ. Nanking no. 7777, August 12, 1924; Wu yuan, roadside thickets, *R. C. Ching*, no. 3284, August 29, 1925, (bush 6 m. high, very common); same locality, alt. 600 m., *N. K. Ip*, no. 53, Herb. Univ. Nanking no. 7676, August 19, 1924 (bush 5 m. high); Chu hwa shan, Hsia ken, alt. 300 m., *A. N. Steward*, no. 1113, Herb. Univ. Nanking no. 5242, April 22, 1924.

Hamamelis mollis Oliver in Hooker's Icon. xviii. t. 1742 (1888).—Hooker f. in Bot. Mag. cxxix. t. 7884 (1903).

Wang shan, alt. 650 m., *R. C. Ching*, no. 2960, July 12, 1925 (bush 5 m. high, rare); same locality, alt. 680 m., *K. Ling*, no. 1205, Herb. Univ. Nanking no. 7766, August 12, 1924 (bush 3 m. high).

ROSACEAE

Determined by E. H. WILSON (except *Spiraea*, *Malus* and *Pyrus*)

Stephanandra chinensis Hance in Jour. Bot. xx. 210 (1882).—Rehder in Sargent, Pl. Wilson. i. 437 (1913); in Jour. Arnold Arb. v. 167 (1924). Chu hwa shan, open thickets, alt. 650 m., *R. C. Ching*, nos. 2659 and 2777, May 1, June 27, 1925 (bush 2–2.5 m. high, common).

Spiraea (determined by A. REHDER).

Spiraea cantoniensis Loureiro, Fl. Cochinch. 322 (1791).

Spiraea Reevesiana Lindley in Bot. Reg. xxx. t. 10 (1844).

Li kau, west of Chemen, alt. 100 m., *R. C. Ching*, no. 3158, August 7, 1925; west of Kweichow city, alt. 130 m., *R. C. Ching*, no. 3343, September 10, 1925 (shrub 3 m. tall).

The leaves of the specimens cited above are comparatively long and narrow measuring about 4–7 cm. in length and 1–2 cm. in width.

Spiraea Blumei G. Don, Gen. Syst. ii. 518 (1832).—Schneider, Ill. Handb. Laubholz. i. 465, fig. 290 v-x, 291 h (1905).

Tien tai, Chu hwa shan, alt. 1150 m., *R. C. Ching*, no. 2819, June 28, 1925; Wang shan, alt. 1200 m., *R. C. Ching*, no. 2991, July 13, 1925.

Spiraea hirsuta Schneid. var. *rotundifolia* Rehder in Sargent, Pl. Wilson i. 445 (1913).

Spiraea Maximowicziana Schneider, Ill. Handb. Laubholz. i. 461 (1905).

Between Tang kow and King chuen, Wang shan, alt. 650 m., *N. K. Ip*, no. 26, Herb. Univ. Nanking no. 7654, August 14, 1924; Ye hsien, alt. 400 m., *R. C. Ching*, no. 3076, July 21, 1925.

This *Spiraea* is perhaps distinct enough to be considered a species under the name proposed by Schneider.

Spiraea chinensis Maximowicz in Act. Hort. Petrop. vi. 193 (1879).

Spiraea pubescens Lindley in Bot. Reg. xxxiii. t. 38 (1847).—Non Turczaninow.

Chu hwa shan, alt. 900 m., *A. N. Steward*, no. 1186, Herb. Univ. Nanking no. 5303, April 25, 1922; same locality, *R. C. Ching*, nos. 24643 (Herb. Univ. Nanking no. 7571) and 2754, May 1 and June 27, 1925; Wang shan, *K. Ling*, no. 1244, Herb. Univ. Nanking no. 7795, August 14, 1924; same locality, alt. 1300 m., *R. C. Ching*, no. 3041, July 17, 1925.

All the specimens cited above differ from typical *S. chinensis* in being less densely pubescent, in Steward's no. 1186 and *K. Ling*'s no. 1244 the pubescence of the inflorescence having nearly or entirely disappeared, but the follicles are pubescent which shows that the specimens belong neither to *S. pubescens* Turcz. nor to *S. Blumei* Don.

Spiraea japonica L. f. var. *Fortunei* Rehder in Bailey, Cycl. Am. Hort. iv. 1703 (1902).

Spiraea Fortunei Planchon in Fl. des Serres IX. 35, t. 871 (1853).—Hooker in Bot. Mag. LXXXVI. t. 5164 (1860).

I hsien, *K. Ling*, no. 1262, Herb. Univ. Nanking no. 7806, August 15, 1924.

Spirea japonica var. *acuminata* Franchet in Nouv. Arch. Mus. Paris, sér. 2, viii. 218 (Pl. David. II. 36) (1885).

Chu hwa shan, alt. 600 m., *R. C. Ching*, no. 2835, June 28, 1925; Li shan, alt. 100 m., *R. C. Ching*, no. 3140, August 5, 1925.

The two specimens cited above look quite distinct; no. 2835 agrees with Franchet's description in the glaucescent and grayish pubescent under surface, but the serration is not very deep nor decidedly double, while no. 3140 has deeply doubly serrate leaves as described by Franchet but the under surface is green and the pubescence is of a different more pilose character.

Exochorda Giralddii Hesse in Mitteil. Deutsch. Dendr. Ges. xvii. 191, 219 (1908); xviii. 295, fig. (1909).—Rehder in Jour. Arnold Arb. v. 174 (1924).

Exochorda racemosa var. *Giralddii* Rehder in Sargent, Pl. Wilson. i. 457 (1913).

Li shan, northwest Chemen, alt. 200 m., wooded ravine, *R. C. Ching*, no. 3104, August 3, 1925 (bush 6 m. high, rare); without precise locality, *R. C. Ching*, no. 2726, in 1925 (flowering specimens).

Cotoneaster hupehensis Rehder & Wilson in Sargent, Pl. Wilson. i. 169 (1912).

Chuchow, Lang ya sze, *A. N. Steward*, Herb. Univ. Nanking no. 2329, June 15, 1922; Wang shan, alt. 1800 m., *A. N. Steward*, no. 1270, Herb. Univ. Nanking no. 7142, August 7, 1924 (bush 2 m. high); She teh hsien, *K. Ling*, no. 1129, Herb. Univ. Nanking no. 7718, August 7, 1924.

Crataegus cuneata Siebold & Zuccarini in Abh. Akad. Münch. iv. pt. II. 130 (Fl. Jap. Fam. Nat. i. 22) (1846).—Hance in Jour. Bot. xvi. 11 (1878).—Lavallée, Icon. Arb. Segrez. 13, t. 5 (1885).

Mespilus cuneata K. Koch in Wochenschr. Gaertn. Pflanzenk. v. 338 (1862).

Chu hwa shan, *R. C. Ching*, no. 2669, Herb. Univ. Nanking no. 7597, May 2, 1925 (bush 2.5 m. high, flowers white, fragrant); Wu yuan, alt. 650 m., *R. C. Ching*, no. 3256, August 18, 1925 (bush 2.5 m. high, fruit bright red; common); without locality, *R. C. Ching*, no. 2735, in 1925; Wu yuan, *K. Ling*, no. 1318, Herb. Univ. Nanking no. 7856, August 24, 1924.

Sorbus alnifolia K. Koch in Ann. Mus. Bot. Lugd.-Bat. i. 249 (1864).—Rehder in Jour. Arnold Arb. v. 183 (1924).

Crataegus alnifolia Siebold & Zuccarini in Abh. Akad. Münch. iv. pt. II. 130 (Fl. Jap. Fam. Nat. i. 22) (1845).

Aria alnifolia Decaisne in Nouv. Arch. Mus. Paris, x. 166 (Mém. Fam. Pom.) (1874).

Pyrus alnifolia Franchet & Savatier, Enum. Pl. Jap. II. 350 (1879).—Hooker f. in Bot. Mag. CXXVII. t. 7773 (1901).—Non Lindley.

Micromeles alnifolia Koehne, Gatt. Pom. 21 (1890); in Gartenfl. xli. 282, fig. 61–62 (1892).

Pyrus Miyabei Sargent in Garden & Forest, vi. 214 (1893); vii. 84, fig. 19 (1894).

Chu hwa shan, Tien tai, alt. 1300 m., thickets, *R. C. Ching*, no. 2790, June 28, 1925 (tree 11 m. tall, fairly common); Wang shan, alt. 1550 m., woods, *R. C. Ching*, no. 3013, July 15, 1925 (tree 6 m. tall; common).

Sorbus Folgneri Rehder in Sargent, Pl. Wilson. II. 271 (1915); in Jour. Arnold Arb. v. 184 (1924).

Micromeles Folgneri Schneider in Bull. Herb. Boissier, sér. 2, vi. 318 (1906); Ill. Handb. Laubholz. i. 704, fig. 386 q, 387 n-n¹ (1906).

Pyrus Folgneri Léveillé, Fl. Kouy-Tchéou, 350 (1914–15).—Bean, Trees & Shrubs Brit. Isles II. 283 (1914).

Chu hwa shan, Wang si che, alt. 600 m., thickets, *R. C. Ching*, no. 2869, June 30, 1925 (tree 6 m. tall, rare); Wu yuan, Chang gon shan, alt. 800 m., *R. C. Ching*, no. 3223, August 16, 1925 (tree 13 m. tall, girth of trunk 0.6 m., rare).

Sorbus Dunnii Rehder in Sargent, Pl. Wilson. II. 273 (1915).

Wang shan, *K. Ling*, no. 1163, Herb. Univ. Nanking no. 7738, August 9, 1925.

This species has subglobose fruits with a deciduous calyx; the primary and secondary veins on the underside of the leaf are clothed with rufous tomentum.

Sorbus spec.

Wang shan, alt. 1300 m., wooded cliffs, *R. C. Ching*, no. 2950, July 12, 1925 (tree 6–10 m. tall, common); same locality, alt. 2050 m., *K. Ling*, no. 1206, Herb. Univ. Nanking no. 7767, August 12, 1924 (tree 3 m. tall), in Herb. Univ. California.

Probably a new species related to *Sorbus commixta* Hedl. of Japan, but the material which is in immature fruit is too fragmentary for proper identification.

Photina serrulata Lindley in Trans. Linn. Soc. XIII. 103 (1821).
(Exclud. syn. *Crataegus glabra* Thunberg.)

Crataegus glabra Loddiges, Bot. Cab. III. t. 248 (1818).—Sims in Bot. Mag. XLVII. t. 2105 (1820).

Chu hwa shan, alt. 1800 m., *K. Ling*, no. 2052, Herb. Univ. Nanking no. 7294, April 25, 1924 (tree 11 m. tall, girth of trunk 0.4 m., flowers white).

Photinia Davidsoniae Rehder & Wilson in Sargent, Pl. Wilson. I. 185 (1912).

Chemen, alt. 100 m., *R. C. Ching*, no. 3167, August 8, 1925 (tree 8 m. tall, girth of trunk 1 m., rare); without locality, *R. C. Ching*, no. 2517, in 1925; Wu yuan, alt. 130 m., woods, *R. C. Ching*, no. 3272, August 21, 1925 (tree 20 m. tall, girth of trunk 2 m., bark cinnamon-brown; rare); same locality, alt. 450 m., *K. Ling*, no. 1308, Herb. Univ. Nanking no. 7846, August 23, 1924 (tree 7 m. tall, girth of trunk 0.3 m.).

Photinia subumbellata Rehder & Wilson in Sargent, Pl. Wilson. I. 189 (1912).

Wang shan, alt. 600 m., woods, *R. C. Ching*, no. 2912, July 5, 1925 (bush 3 m. high).

Photinia villosa De Candolle, Prodr. II. 631 (1825).—Sargent in Garden & Forrest I. 67, fig. 12 (1888).

Crataegus villosa Thunberg, Fl. Jap. 204 (1784).

Pourthiaea villosa Decaisne in Nouv. Arch. Mus. Paris, x. 147, 149 (1874).—Shirasawa, Icon. Ess. For. Jap. I. t. 29, fig. 1-13 (1900).

Photinia variabilis Hemsley in Jour. Linn. Soc. XXIII. 263 (1887), in part.

Chu hwa shan, *R. C. Ching*, no. 2691, Herb. Univ. Nanking no. 7619, May 2, 1925 (tree 10 m. tall; common).

Photinia villosa var. *sinica* Rehder & Wilson in Sargent, Pl. Wilson. I. 186 (1912).

Wang shan, alt. 1400 m., thickets, *R. C. Ching*, no. 3040, July 15, 1925 (bush 5 m. high).

Photinia Beauverdiana Schneider in Bull. Herb. Boiss. sér. 2, VI. 319 (1906); Ill. Handb. Laubholzk. I. 710, fig. 393 p-q (1906).

Chu hwa shan, woods, *R. C. Ching*, no. 2623, Herb. Univ. Nanking no. 7550, April 29, 1925 (tree 6 m. tall, common); same locality, Tien tai, *R. C. Ching*, no. 2824, June 28, 1925 (bush 6 m. tall, common); Wang shan, thickets and rocky cliffs, *R. C. Ching*, no. 3003, July 13, 1925 (bush 8 m. high).

Photinia Beauverdiana var. *brevifolia* Cardot in Lecomte, Not. Syst. III. 378 (1918).

Wu yuan, Chang gon shan, alt. 800 m., woods, *R. C. Ching*, no. 3231, August 16, 1925 (tree 6 m. tall, common).

Raphiolepis indica Lindley apud Ker in Bot. Reg. vi. 465 (1820), descript. et fig. exclud.—De Candolle, Prodr. ii. 630 (1825).—Nakai in Jour. Arnold Arb. v. 65 (1924).

Crataegus indica Linnaeus Spec. 477 (1753).—Sims in Bot. Mag. xli. t. 1726 (1815).

Wang shan, alt. 600 m., thickets, *R. C. Ching*, no. 2932, July 11, 1925 (bush 6 m. high; rare); same locality, between Tang kong and Kong chuen, alt. 1100 m., *N. K. Ip*, no. 27, Herb. Univ. Nanking no. 7655, August 14, 1924 (bush 3 m. high).

Chaenomeles sinensis Koehne, Gatt. Pomac. 29 (1896), sub. "C. chinensis."—Rehder in Jour. Arnold Arb. v. 186 (1924).

Cydonia sinensis Thouin in Ann. Mus. Paris, xix. 145 t. 8, 9 (1812).

Wang shan, alt. 600 m., *R. C. Ching*, no. 2934, July 11, 1925 (tree 11 m. tall, bark greyish brown; rare).

Malus (determined by A. REHDER).

Malus theifera Rehder in Sargent, Pl. Wilson. ii. 283 (1915).—Chun, Chin. Econ. Trees, 173, fig. 65 (1923).

Kimien, *N. K. Ip*, Herb. Univ. Nanking no. 4799, August 22, 1923; T'au k'ou, Wang shan, *K. Ling*, no. 1251, Herb. Univ. Nanking no. 7799, August 14, 1924; Chu hwa shan, *R. C. Ching*, no. 2607, April 28, 1925 (tree 9 m. tall); Wang si che, Chu hwa shan, alt. 600 m., *R. C. Ching*, no. 2844, June 29, 1925 (shrub 4 m. tall); Wang shan, alt. 1250 m., *R. C. Ching*, no. 3051, July 19, 1925.

Malus formosana Kawakami in Tokyo Bot. Mag. xxv. 145, t. 4 (1911).

Wang shan, alt. 800 m., *K. Ling*, no. 1145, Herb. Univ. Nanking, no. 7727, August 9, 1924; same locality, alt. 600 m., *R. C. Ching*, no. 2906, July 5, 1925 (shrub 8 m. tall).

Pyrus (determined by A. REHDER).

Pyrus betulaefolia Bunge in Mém. Div. Sav. Acad. Sci. St. Pétersb. ii. 101 (Enum. Pl. Chin. Bor. 27) (1833).—Decaisne, Jard. Fruit. i. t. 20 (1872).—Sargent in Gard. & For. vii. 224, fig. 39 (1894).

Chuchow, Herb. Univ. Nanking no. 952, April 13, 1921; Kien ping, Herb. Univ. Nanking no. 1608, September 3, 1921; Tsinan fu, Kao ping fang, Herb. Univ. Nanking no. 2941, October 1922; foot of Chu hwa shan, *R. C. Ching* no. 2720, April 28, 1925; Tatung, alt. 100 m., *R. C. Ching*, no. 2742, June 25, 1925 (tree 20 m. tall).

Pyrus Calleryana Decaisne, Jard. Fruit. i. in text of t. 8 (1872).—Nakai Fl. Sylv. Kor. vi. 55, t. 25 (1916).

Su chow fu, *S. N. Lei*, Herb. Univ. Nanking no. 2982, September 25, 1922; Kimien hsien, alt. 300 m., *N. K. Ip*, Herb. Univ. Nanking no. 4780, August 28, 1923; Heh hsien, *K. Ling*, no. 1257, Herb. Univ. Nanking no. 7802, August 14, 1924; Tien tai shan, Chu hwa shan, *A. N. Steward*,

no. 1174, Herb. Univ. Nanking no. 5295, April 25, 1924; same locality, alt. 950, *R. C. Ching*, no. 2830, June 28, 1925; Chu hwa shan, *R. C. Ching*, no. 2612, Herb. Univ. Nanking no. 7537, April 29, 1925; Su hsien, alt. 300 m., *R. C. Ching*, no. 3093, July 27, 1925 (shrub 6.5 m. tall); Wu yuan, *R. C. Ching*, no. 3252, August 17, 1925 (shrub 10 m. tall).

The specimens collected by Lei and by Ip differ in their generally broader and quite glabrous leaves from the other specimens which are ferrugineous-pubescent on the midrib beneath and also on the pedicels and calyx of the flowering specimens; in Ip's specimen the calyx appears to be persistent.

Pyrus Calleryana var. *lanceata* Rehder in Jour. Arnold Arb. vii. 28 (1926).

Shih tai hsien, *A. N. Steward*, Herb. Univ. Nanking no. 5486, August, 1924 (type); Yu ting, *N. K. Ip*, Herb. Univ. Nanking no. 4800, August 24, 1923; Wy yuen, alt. 550 m., *N. K. Ip*, no. 57, Herb. Univ. Nanking no. 7680, August 19, 1924; south of Chu hwa shan, alt. 130 m., *R. C. Ching*, no. 2893, July 3, 1925.

Rhodotypus scandens Makino in Tokyo Bot. Mag. xxvii. 126 (1913).

Corchorus scandens Thunberg in Trans. Linn. Soc. ii. 335 (1793).

Keria tetrapetala Siebold in Verh. Bataav. Genoot. xii. 69 (Syn. Pl. Oec. Jap.) (1830), nomen nud.

Rhodotypus kerrioides Siebold & Zuccarini, Fl. Jap. i. 185 t. 99, fig. 1 (1841).—Hooker f. in Bot. Mag. xcv. t. 5805 (1869).

Rhodotypus tetrapetala Makino in Tokyo Bot. Mag. xvii. 13 (1903).

Chu chow, *L. F. Tsu*, Herb. Univ. Nanking no. 399, April 14, 1921.

Kerria japonica De Candolle in Trans. Linn. Soc. xii. 157 (1817); Prodr. ii. 541 (1825).—Lindley in Bot. Reg. xxii. t. 1873 (1836).—Hemsley in Jour. Linn. Soc. xxiii. 229 (1887).

Rubus japonicus Linnaeus, Mant. i. 145 (1767).

Corchorus japonicus Thunberg, Fl. Jap. 227 (1784).

Spiraea japonica Desvaux in Mém. Soc. Linn. Paris, i. 25 (1822).—Non Linnaeus f.

Chu hwa shan, moist places, alt. 330 m., *R. C. Ching*, nos. 2594 (Herb. Univ. Nanking no. 7519) and 2770, April 28 and June 26, 1925 (bush 2–2.5 m. high, flowers yellow; common); same locality, Chi yuen sze, alt. 330 m., *A. N. Steward*, no. 1130, Herb. Univ. Nanking no. 5259, April 24, 1924 (bush 2 m. high, flowers yellow-orange); Wang shan, alt. 700 m., *N. K. Ip*, no. 32, Herb. Univ. Nanking no. 7658, August 14, 1924 (bush, flowers yellow); same locality, *K. Ling*, no. 1228, Herb. Univ. Nanking no. 7785, August 12, 1924.

Kerria japonica var. *pleniflora* Witte, Fl. Nederl. Tuin. 261, t. 66 (1868).

Keria japonica var. β *flore pleno* Sims in Bot. Mag. xxxii., t. 1296 (1810).

East, city of Kweichow, alt. 160 m., *R. C. Ching*, no. 3333, September 10, 1925 (bush 3 m. high; rare).

Rubus Buergeri Miquel in Ann. Mus. Bot. Lugd.-Bat. III. 36 (1867); Prol. Fl. Jap. 224 (1866-67).

Chemen, alt. 600 m., *R. C. Ching*, no. 3122, August 5, 1925 (rare).

Rubus Swinhoii, Hance in Ann. Sci. Nat. Paris, sér. 5, v. 211 (1866).—Hemsley in Jour. Linn. Soc. XXIII. 237 (1887).

Chu hwa shan, alt. 330 m., thickets, *R. C. Ching*, nos. 2679 (Herb. Univ. Nanking no. 7607) and 2763, May 2 and June 26, 1925 (shrub, climbing 3-6 m. high, fruit deep purple; common).

Rubus tephrodes Hance in Jour. Bot. XII. 260 (1874).—Hemsley in Jour. Linn. Soc. XXIII. 238 (1887).

South Siunin, alt. 330 m., *R. C. Ching*, no. 3330, Sept. 7, 1925 (shrub 3 m. high; common).

Rubus Lambertianus var. **xanthoneurus** Focke in Bot. Jahrb. XXIX. 396 (1901).

Chemen, 100 m., *R. C. Ching*, no. 3170, August 8, 1925 (climber 3 m. high; fairly common); Ch'ang suin, *A. N. Steward*, no. 1357, Herb. Univ. Nanking no. 7227, August 14, 1924.

Rubus corchorifolius Linnaeus f., Suppl. Pl. Syst. Veget. 263 (1781).—Hemsley in Jour. Linn. Soc. XXIII. 230 (1887).

Chu hwa shan, *R. C. Ching*, nos. 2604 and 2710, Herb. Univ. Nanking nos. 7529 and 7637, April 28 and May 3, 1925 (3 m. high; common).

Rubus trianthus Focke in Bibl. Bot. LXXII. 140, fig. 59 (Spec. Rub.) (1911).

Chu hwa shan, gravelly hillsides, *R. C. Ching*, no. 2603, Herb. Univ. Nanking no. 7528, April 28, 1925 (bush 0.5 m. high; rare).

Rubus Thunbergii Siebold & Zuccarini in Abhand. Akad. Münch. iv. pt. II, 126 (Fl. Jap. Fam. Nat. I. 126) (1846).—Hemsley in Jour. Linn. Soc. XXIII. 238 (1887).

Chu hwa shan, open hillsides, *R. C. Ching*, no. 2692, Herb. Univ. Nanking no. 7620, May 2, 1925 (bush 0.75 m. high, common).—Same locality, Hsia ken, alt. 300 m., *A. N. Steward*, no. 1108, Herb. Univ. Nanking no. 5238, April 22, 1924 (bush 1 m. high, flowers white, fruit red, edible).

Rubus Chingii H. H. Hu in Jour. Arnold Arb. VI. 141 (1925), errore typograph. "*R. Chungii*"; VII. 70 (1926).

Chu hwa shan, brushy slopes, *R. C. Ching*, no. 2608, Herb. Univ. Nanking no. 7533, April 28, 1925 (erect shrub 3 m. high; common); same locality, alt. 1300 m., *K. Ling*, no. 2067, Herb. Univ. Nanking no. 7299, April 25, 1924 (bush 2 m. high, flowers white).

Rubus coreanus Miquel in Ann. Mus. Bot. Lugd.-Bat. III. 34 (1867).—Hemsley in Jour. Linn. Soc. XXIII. 230 (1887).—Rehder in Jour. Arnold Arb. v. 186 (1924).

Liu chu wan, en route Chu hwa shan, alt. 330 m., *R. C. Ching*, no. 2752, June 26, 1925 (5 m. tall, fruit black; common).

Rubus innominatus S. Moore in Jour. Bot. XIII. 226 (1875).—Rehder in Jour. Arnold Arb. v. 198 (1924).

Chu hwa shan, thickets, *R. C. Ching*, no. 2781, June 27, 1925 (bush 2.5 m.; common).

Rubus spec.

Wang shan, back of Lion Ridge, alt. 1300 m., *R. C. Ching*, no. 2878, July 12, 1925 (1–5 m. high, common).

Apparently new species related to *R. trianthus* Focke with thin membranous leaves, often trilobed, and coarsely biserrate. The material consists of one specimen in ripe fruit which the collector says is red.

Rubus spec.

Ye hsien, alt. 330 m., *R. C. Ching*, no. 3095, July 27, 1925 (5 m. tall; common); Wang shan, alt. 600 m., *R. C. Ching*, no. 4130, Herb. Univ. Nanking no. 8521, July 5, 1925 (0.6 m. tall; common undergrowth); same locality, alt. 1100 m., *A. N. Steward*, no. 1259, Herb. Univ. Nanking no. 5498, August 9, 1924 (0.5 m. high, fruit red; not common).

Related to *R. flagelliflorus* Focke and probably new. The material is too fragmentary for accurate determination.

Rosa Gentiliana Léveillé & Vaniot in Bull. Soc. Bot. France, LV. 55 (1908).—Willmott, Gen. Rosa, II. 513, t. (1914).—Rehder & Wilson in Sargent, Pl. Wilson. II. 312 (1915).

Chu hwa shan, alt. 650 m., thickets, *R. C. Ching*, no. 2804, June 28, 1925 (climber 11 m. tall, common); same locality, Tien tai, alt. 1250 m., cliffs, *R. C. Ching*, no. 2831, June 28, 1925 (climber 10 m. tall, flowers white, fragrant); Wu yuan, *N. K. Ip*, no. 54, Herb. Univ. Nanking no. 7677, August 19, 1924 (climber).

Rosa spec.

Li shan, South Chemen, alt. 1300 m., *R. C. Ching*, no. 3110, August 5, 1925 (climber 6 m. tall; fairly common).

Possibly a new species related to *R. Soulieana* Crépin of western Szechuan, but the material is too poor for identification. It has glabrous leaves and shoots, two to three pairs of obovate, usually rounded, finely toothed leaflets, glandular pedicels and subglobose fruit.

Rosa laevigata Michaux, Fl. Bor. Am. I. 295 (1803).—Willmott, Gen. Rosa, I. 117, t. (1911).—Rehder & Wilson in Sargent, Pl. Wilson. II. 318 (1915).

Rosa sinica Aiton, Hort. Kew. II. 203 (1789).—Lindley, Ros. Monog. 126, t. 16 (1820).—Hooker in Bot. Mag. LV. t. 2847 (1828).—Non Linnaeus.

Rosa hystrix Lindley, Ros. Monog. 129, t. 17 (1820).

Chu hwa shan, open places, *R. C. Ching*, no. 2675, Herb. Univ. Nanking no. 7603, May 2, 1925 (climber 13 m. tall; very common); same

locality, Hsia ken, alt. 300 m., *A. N. Steward*, no. 1105, Herb. Univ. Nanking no. 5235, April 22, 1924; South Siunin, alt. 1300 m., *R. C. Ching*, no. 3320, Sept. 7, 1925 (climber 10 m. tall; common); Feng shui ling, alt. 400 m., *A. N. Steward*, no. 1241, Herb. Univ. Nanking no. 5481, August 6, 1924.

Rosa Roxburghii Trattinnick, *Ros. Monog.* II. 233 (1823).—Rehder & Wilson in Sargent, *Pl. Wilson.* II. 319 (1915).

Rosa microphylla Roxburgh apud Lindley, *Ros. Monog.* 9, 146 (1820).—Hooker in *Bot. Mag.* LXIII. t. 3490 (1836).—Hemsley in *Jour. Linn. Soc.* XXXIII. 252 (1887).—Not Desfontaines.

Chu hwa shan, alt. 650 m., cultivated, *R. C. Ching*, no. 2862, June 29, 1925 (bush 2.5 m. high).

Rosa sertata Rolfe in *Bot. Mag.* CXXXIX. t. 8473 (1913).—Rehder & Wilson in Sargent, *Pl. Wilson.* II. 327 (1915).

Wang shan, alt. 1500 m., thickets, *R. C. Ching*, no. 3033, July 15, 1925 (bush 3 m. tall; common); same locality, alt. 1650 m., *R. C. Ching*, no. 3011, July 15, 1925 (bush 5 m. high, flowers rosy red, fragrant; common).

Prunus salicina Lindley in *Trans. Hort. Soc.* VII. 239 (1830).

Prunus triflora Roxburgh, *Fl. Ind.*, ed. 2, 11, 501 (1832).

Prunus ichangana Schneider in Fedde, *Rep. Spec. Nov.* I. 50 (1905).

West Chemen, alt. 100 m., open thickets, *R. C. Ching*, no. 3190, August 9, 1925 (tree 8 m. tall; common).

Prunus Persica Batsch, *Beytr. & Entwürfe Pragm. Gesch. Naturr.* 30 (1801).—Stokes, *Bot. Mat. Med.* III. 100 (1812).

Amygdalus Persica Linnaeus, *Spec.* 472 (1753).

Persica vulgaris Miller, *Gard. Dict.* ed. 8 (1768).

Chu hwa shan, cliffs, *R. C. Ching*, no. 2614, Herb. Univ. Nanking no. 7539, April 29, 1925 (tree 5 m. tall; common).

Prunus glandulosa Thunberg, *Fl. Jap.* 202 (1784).—Koehne in *Mitt. Deutsch. Dendr. Ges.* XVIII. 181, fig. 2 (1909).

Cerasus glandulosa Loiseleur in *Nouv. Duhamel*, v. 33 (1825).

Prunus japonica Hutchinson in *Bot. Mag.* CXXXV. t. 8260 (1909).—Non Thunberg.

Chu hwa shan, roadside thickets, *R. C. Ching*, no. 2708, Herb. Univ. Nanking no. 7635, May 3, 1925 (bush 1 m. high; common).

Prunus glandulosa f. *albiplena* Koehne in Sargent, *Pl. Wilson.* I. 264 (1912), "var. *glabra* f."

Cerasus japonica β. *multiplex* Seringe apud De Candolle, *Prodr.* II. 539 (1825), pro parte.

Prunus japonica var. *flore pleno*, Siebold & Zuccarini, *Fl. Jap.* I. 172, t. 90, f. iii. (1826), pro parte.

Chu hwa shan, cultivated, *R. C. Ching*, no. 2635, Herb. Univ. Nanking no. 7563, May 1, 1925 (bush 1.3 m. high).

Prunus subhirtella var. *ascendens* Wilson, Cherries of Japan, 10, t. 3, (1916).

Prunus Miqueliana Maximowicz in Bull. Acad. Sci. St. Pétersb. sér. 3, xxix, 98 (1883), pro parte.

Prunus Herincquiana Koehne in Mitt. Deutsch. Dendr. Ges. xviii. 175 (1909), pro parte.—Non Lavallée.

Prunus microlepis Koehne in Sargent, Pl. Wilson. i. 256 (1912).

Chu hwa shan, woods, *R. C. Ching*, no. 2630, Herb. Univ. Nanking no. 7558, April 30, 1925 (tree 20 m. tall, girth of trunk 1 m.).

Prunus serrulata var. *spontanea* Wilson, Cherries of Japan, 28 (1916).

Prunus Pseudo-Cerasus β . *spontanea* Maximowicz in Bull. Acad. Sci. St. Pétersb. xxix. 102 (1883).—Shirasawa, Icon. Ess. For. Jap. ii. t. 27, fig. 1-14 (1908).

Prunus tenuiflora Koehne in Sargent, Pl. Wilson. i. 209, (1912), pro parte.

Prunus densifolia Koehne in Fedde, Rep. Spec. Nov. xii. 135 (1913).

Chu hwa shan, exposed rocky ridges, *R. C. Ching*, no. 2615, Herb. Univ. Nanking no. 7540, April 29, 1925 (flowers faintly pink; common); same locality, T'ien T'ai shan, alt. 1500 m., *A. N. Steward*, no. 1165, Herb. Univ. Nanking no. 5288, April 25, 1924 (tree 7 m. tall, girth of trunk 0.45 m., flowers pink and white); same locality, alt. 1300 m., *R. C. Ching*, no. 2812, June 28, 1925 (tree 10 m. tall, bark shining brown; common above alt. of 1000 m.).

Prunus Dielsiana Schneider in Fedde, Rep. Spec. Nov. i. 68 (1905).—Koehne in Sargent, Pl. Wilson. i. 243 (1912).

Chu hwa shan, *R. C. Ching*, no. 2584, Herb. Univ. Nanking no. 7510, April 28, 1925 (tree 8 m. tall, flowers pink; common); same locality, Chi yuen sze, alt. 1100 m., *A. N. Steward*, no. 1142, Herb. Univ. Nanking no. 5270, April 24, 1924 (tree 8 m. tall, girth of trunk 0.45 m.).

Prunus perulata Koehne in Sargent, Pl. Wilson. i. 61 (1911).

Chu hwa shan, alt. 650 m., *R. C. Ching*, nos. 2606 and 2810, April 28 and June 28, 1925 (tree 18 to 20 m. tall, girth of trunk 1 to 1.5 m., bark dark gray, rough; common).

Prunus bicolor Koehne in Sargent, Pl. Wilson. i. 69 (1911).

Chu hwa shan, Tien, tai, alt. 1300 m., woods, *R. C. Ching*, no. 2858, June 29, 1925 (tree 20 m. tall, girth of trunk 1 m., bark gray, rough; common).

LEGUMINOSAE

Determined by A. REHDER

Albizia julibrissin Durazzini in Mag. Tosc. iii. pt. iv. 11 (1792).

Chuchow, Lang yah sze, *A. N. Steward*, Herb. Univ. Nanking, no. 2313, June 14, 1922; Wang shan, *R. C. Ching*, no. 2930, July 5, 1925.

Albizia kalkora Prain in Jour. As. Soc. Bengal, lxvi. 511 (1897); Novic. Ind. 345 (1905).

Tien tai, Chu hwa shan, alt. 100 m., *R. C. Ching*, no. 2829, June 28, 1925; Chemen, alt. 900 m., *R. C. Ching*, no. 3141, August 6, 1925.

Cercis chinensis Bunge in Mém. Div. Sav. Acad. Sci. St. Pétersb. II. 95 (Enum. Pl. Chin. Bor. 21) (1833).

Chu chow, *L. F. Tsu*, Herb. Univ. Nanking no. 437, April 13, 1921; Chu chow, Lang yah sze, *A. N. Steward*, Herb. Univ. Nanking no. 2306, June 14, 1922; Li shan, northwest Chemen, alt. 300 m., *R. C. Ching*, no. 3145, August 6, 1925.

Cercis Chingii Chun in Jour. Arnold Arb. VIII. 20 (1927).

Fifteen li east of Kweichow City, *R. C. Ching*, no. 3332, September 10, 1925 (type).

Gleditsia horrida Makino in Tokyo Bot. Mag. XVII. 12 (1903).

Gleditsia japonica Miquel in Ann. Mus. Bot. Lugd.-Bat. III. 54 (1867).

Siunin, alt. 350 m., *R. C. Ching*, no. 3259, August 18, 1925.

Gleditsia sinensis Lamareck, Encycl. Méth. II. 465 (1786).

Chu hwa shan, alt. 550 m., *R. C. Ching*, no. 2863, June 30, 1925; east of Kweichow City, alt. 150 m., *R. C. Ching*, no. 3335, September 10, 1925.

Gymnocladus chinensis Baillon in Compt. Rend. Assoc. Franc. Avanc. Sci. III. 418, t. 4 (1875).

Chu hwa shan, alt. 500 m., *A. N. Steward*, no. 1122, Herb. Univ. Nanking no. 5251, April 23, 1924; Ma che, alt. 300 m., *R. C. Ching*, no. 3210, August 15, 1925.

Caesalpinia sepiaria Roxburgh, Fl. Ind. II. 360 (1824).

Ching yang hsien, *K. Ling*, no. 2012, Herb. Univ. Nanking no. 7290, April 22, 1924; Chu hwa shan, *R. C. Ching*, no. 2673, Herb. Univ. Nanking no. 7601, May 2, 1925.

Ormosia Henryi Prain in Jour. As. Soc. Bengal, LXIX. 180 (1900).

West Chemen, alt. 100 m., *R. C. Ching*, no. 3188, August 9, 1925 (tree 10 m. tall).

Sophora japonica Linnaeus, Mant. I. 68 (1767).

Hu shie, Herb. Univ. Nanking no. 1426, August 15, 1915; Wu yuan, *K. Ling*, no. 1334, Herb. Univ. Nanking no. 7870, August 24, 1924; west Wu yuan, alt. 200 m., *R. C. Ching*, no. 3265, August 21, 1925 (tree 28 m. tall).

Sophora flavescens Aiton, Hort. Kew. II. 43 (1789).

Chuchow, *A. N. Steward*, Herb. Univ. Nanking no. 2319, June 15, 1922; Hang chow, West Lake, *A. N. Steward*, Herb. Univ. Nanking no. 2380, June 21, 1922; Chu hwa shan, Erh sun tien, alt. 300 m., *R. C. Ching*, no. 4037, Herb. Univ. Nanking no. 8437, June 26, 1925.

Cladrastis Wilsonii Takeda in Sargent, Pl. Wilson. II. 97 (1914).

Tien tai, Chu hwa shan, alt. 1150 m., *R. C. Ching*, no. 2817, June 28, 1925; Wang shan, alt. 600-7500 m., *R. C. Ching*, nos. 2940 and 2958, July 11 and 12, 1925 (tree 8-10 m.).

Indigofera Fortunei Craib in Not. Bot. Gard. Edinb. viii. 53 (1913).

Indigofera venulosa Forbes & Hemsley in Jour. Linn. Soc. xxiii. 158 (1886).—Vix Champion.

Chuchow, Herb. Univ. Nanking no. 1070, May 5, 1920; Chu hwa shan, *R. C. Ching*, no. 2666, May 2, 1925.

Indigofera Kirilowii Maximowicz apud Palibin in Act. Hort. Petrop. xvii. 62, t. 4 (1899), in part.

Indigofera macrostachya Bunge in Mém. Div. Sav. Sci. St. Pétersb. ii. 90 (Enum. Pl. Chin. Bor. 16) (1833).—Non Ventenat.

Wang shan, alt. 600 m., *R. C. Ching*, no. 3057, July 20, 1925.

Indigofera pseudotinctoria Matsumura in Bot. Mag. Tokyo, xvi. 62 (1902).—Craib in Not. Bot. Gard. Edinb. viii. 69 (1913).

Chu hwa shan, Erh sun tien, alt. 950 m., *R. C. Ching*, no. 4026, Herb. Univ. Nanking no. 8426, June 26, 1925.

Millettia reticulata Benthham in Miquel, Pl. Junghuhn. i. 249 (1852).

Ye hsien, alt. 18 m., *R. C. Ching*, no. 3080, July 27, 1925.

Millettia Dielsiana Harms in Bot. Jahrb. xxix. 412 (1900).

Chemen, alt. 130 m., *R. C. Ching*, no. 3200, August 13, 1925.

Wistaria sinensis Sweet, Hort. Brit. 121 (1827), "Wisteria."

Wisteria chinensis De Candolle, Prodr. ii. 390 (1825).

Wang si che, south Chu hwa shan, alt. 550 m., *R. C. Ching*, no. 2870, June 30, 1925.

Wistaria japonica Siebold & Zuccarini, Fl. Jap. i. 88, t. 43 (1835).

Millettia japonica A. Gray in Mem. Am. Acad. n. ser. vi. 386 (1859).

Liu yung chi, alt. 250 m., *R. C. Ching*, no. 2881, June 30, 1925 (climber 7 m. high); Ye hsien, alt. 250 m., *R. C. Ching*, no. 3091, July 27, 1925.

This species has to my knowledge not been collected in China before. It is native of southern Japan and is found in southern Hondo, Shikoku and Kiushu.

Desmodium laburnifolium De Candolle, Prodr. ii. 337 (1825).

Wu yuan, alt. 400 m., *N. K. Ip*, no. 72, Herb. Univ. Nanking, no. 7688, August 22, 1924; Li shan, Chemen, alt. 230 m., *R. C. Ching*, no. 3135, August 5, 1925.

Desmodium podocarpum De Candolle in Ann. Sci. Nat. iv. 102 (1825); Prodr. ii. 336 (1825).

Wu lin lin, west Chemen, alt. 130 m., *R. C. Ching*, no. 4419, Herb. Univ. Nanking no. 8799, August 8, 1925.

Lespedeza Buergeri Miquel in Ann. Mus. Bot. Lugd.-Bat. ii. 47 (1867); Prol. Fl. Jap. 235 (1867).

Northern foot of Chu hwa shan, alt. 375 m., *R. C. Ching*, no. 2767, June 26, 1925; Wang shan, alt. 1200–1350 m., *R. C. Ching*, nos. 2993 and 2999, July 13, 1925.

Lespedeza formosa Koehne, Deutsch. Dendr. 343 (1893).

Lespedeza Sieboldi Miquel in Ann. Mus. Bot. Lugd.-Bat. III. 47 (1867), excl. specim. Oldham no. 333; Prol. Fl. Jap. 235 (1867).

Wang shan, alt. 1300 m., *A. N. Steward*, no. 1284, Herb. Univ. Nanking no. 7156, August 11, 1924; south side of Wang shan, alt. 1150 m., *R. C. Ching*, no. 3067, July 30, 1925; Li shan, northwest Chemen, *R. C. Ching*, no. 3120, August 5, 1925; Chang gon shan, Wu yuan, alt. 900 m., *R. C. Ching*, no. 3234, August 17, 1925.

Ching's no. 3067 differs from the typical form in the acuminate leaflets and the less deeply divided calyx.

Lespedeza Fordii Schindler in Bot. Jahrb. XLIX. 586 (1913).

Tsi che, Wu yuan, alt. 500-600 m., *R. C. Ching*, nos. 3308 and 4609 (Herb. Univ. Nanking no. 8997), September 4, 1925.

Lespedeza daurica Schindler in Fedde, Rep. Spec. Nov. XXII. 274 (1926).

Lespedeza trichocarpa Persoon, Syn. Pl. II. 318 (1807).

Tsi che, Wu yuen, *R. C. Ching*, no. 4608, Herb. Univ. Nanking no. 8996, September 4, 1925.

Campylotropis macrocarpa Rehder in Sargent, Pl. Wilson. II. 113, in nota (1914).

Lespedeza macrocarpa Bunge in Mém. Div. Sav. Acad. Sci. St. Pétersb. II. 92 (Enum. Pl. Chin. Bor. 18) (1833).

Campylotropis chinensis Bunge in Mém. Kazan Univ. IV. 158 ? (Pl. Mongh.-Chin. Dec. I. 7) (1835).

South Kweichow, alt. 150 m., *R. C. Ching*, no. 4643, Herb. Univ. Nanking no. 9031, September 10, 1925; Wang shan, *R. C. Ching*, no. 2926, July 5, 1925.

Ching's no. 4643 has the under side of the leaves, the stem and peduncles covered with a dense yellowish soft pubescence, while no. 2926 is glabrescent and has the leaves only sparingly appressed-pubescent beneath and differs from the type in its short pedicels which are only 1.5-2 mm. long.

Dalbergia Hancei Benth in Jour. Linn. Soc. IV. suppl. 44 (1860); Fl. Hongkong. 93 (1861).

Li liu, northwest Chemen, alt. 1300 m., *R. C. Ching*, no. 3097, August 3, 1925 (climber 20 m. high).

Dalbergia hupeana Hance in Jour. Bot. XX. 5 (1882).

Wang si che, south Chu hwa shan, alt. 500 m., *R. C. Ching*, no. 2872, June 30, 1925 (tree 17 m. tall); Li shan, northwest Chemen, alt. 230 m., *R. C. Ching*, no. 3146, August 6, 1925 (shrub 8 m. tall); south Siunin, alt. 130 m., *R. C. Ching*, no. 3317, September 7, 1925 (tree 12 m. tall).

(To be continued)

A PREVIOUSLY UNDESCRIBED SPECIES OF MANILTOA FROM PAPUA.

C. T. WHITE,

*Government Botanist, Brisbane, Australia***Maniltoa lenticellata**, n. sp.

Arbor magna (Lane-Poole), glabra, ramulis dense lenticellatis. Folia 4-5-jugata, petiolata, rhachi cum petiolo circiter 12 cm. longa, petiolo ipso 0.5 cm. longo; foliolis petiolulatis petiolulis 0.5 cm. longis, laminis plerumque 8 : 3.5 cm. magnis perobliquis ad basin cuneatis ad apicem longe acuminatis, acumine ipso 0.5-1 cm. longo emarginato. Racemi axillares, juventute bracteis majusculis imbricatis involucrati, bracteis exterioribus glabris, bracteis interioribus saepe pubescentibus, rhachi glabra vel subglabra 3-5 cm. longa; pedicelli glabri vel parce pubescentes, cum recaptaculo brevi 2.5 cm. longi, bracteolis 2 linearibus 6 mm. longis, altera 0.6 cm. altera 1 cm. supra basin pedicelli affixa; sepala circiter 1.5 : 0.5 cm. (?); petala angusta (?); stamina numerosa, circiter 1.7 cm. longa; ovarium glabrum, stipitatum stipite circiter 0.5 cm. longo. Legumen (paulum immaturum) oblique oblongum vel subovoideum, complanatum, circiter 2.5 cm. longum, 2 cm. latum, semine subreniformi 1.5 cm. longo 1 cm. lato.

PAPUA: Sageri, Northern Division. *C. E. Lane-Poole*, no. 203, July 1922 (flowering specimens; type); Budatobara, *L. J. Brass*, no. 779, December 1925 (fruiting specimens).

Collectors' Notes: A large tree, 8 ft. in girth with a bole of 60 ft. Large buttresses up to 6 ft. Bark grey, covered with small pustules, inner bark streaked with yellow. Native name Kaira (Buna District). A very hard wood, much thought of by natives; they make clubs of it and sometimes combs. (*C. E. Lane-Poole*.) A handsome tree 30 to 40 ft. with a rough brown bark; grows in riverine rain forests. (*L. J. Brass*).

Mr. L. J. Brass recently spent some months collecting in Papua on behalf of the Arnold Arboretum. His collections have been entrusted to me by Prof. Sargent for examination. Among the specimens received are several species of *Maniltoa*. I recognised the present species as one identical with flowering specimens collected in Papua by Mr. C. E. Lane-Poole and that had been put in our herbarium awaiting further material. Mr. Lane-Poole's specimens had been subjected to great pressure and it was rather difficult to make out the size and shape of the sepals and petals.

According to Harms' review of the genus in Lauterbach's "Beiträge zur Flora von Papuasien, VI" (in *Bot. Jahrb.* lv. 47-54. 1917) the present species would come between *M. Hollrungii* Harms and *M. Peekelii* Harms from both of which it is distinguished by its greater number of leaflets.

SWINGLEA, A NEW GENERIC NAME IN THE RUTACEAE

E. D. MERRILL

IN 1913 Dr. Walter T. Swingle¹ showed that the Philippine species described in 1837 as *Limonia glutinosa* Blanco represented a distinct generic type and adopted for it the name *Chaetospermum*, this in turn based on *Limonia*, subgenus *Chaetospermum* M. Roemer,² 1846, Roemer's subgeneric name in turn being based on *Limonia glutinosa* Blanco.

In raising this group to generic rank the fact was overlooked that in 1892 Saccardo³ had used the same name for a genus of fungi in the family *Tuberculariaceae*, *Moniliales*, Fungi Imperfecti. It, therefore, becomes necessary to coin a new generic name for *Chaetospermum* (M. Roem.) Swingle 1913 (*Limonia*, subgen. *Chaetospermum* M. Roem. 1846), non *Chaetospermum* Saccardo 1892.

The genus is a monotypic one confined to the island of Luzon in the Philippines. The species is widely distributed at low and medium altitudes, occurring in thickets and in secondary forests from Isabela Province in northern Luzon to Tayabas Province in central Luzon. The adjusted synonymy is as follows:

Swinglea Merrill, nom. nov.

(*Limonia* Linn. subgen. *Chaetospermum* M. Roemer, 1846.—*Chaetospermum* Swingle, 1913, non Saccardo, 1892.)

Swinglea glutinosa (Blanco), comb. nov.

Limonia glutinosa Blanco, Fl. Filip. 358 (1837).

Feronia ternata Blanco, op. cit. ed. 2, 252 (1845); ed. 3, II, 104, t. 124 (1878).

Aegle decandra Naves apud Fernandez-Villar, Novis. App. Fl. Filip. 38 (1880).—Vidal, Sin. Fl. Filip. Atlas, 18, t. 25, fig. j (1883).—Merrill, Spec. Blanco. 19 (1918).

Aegle glutinosa Merrill in (Philip.) Govt. Labor. Publ. VI. 12 (1904); XVII. 29 (1905); Fl. Manila, 271 (1912).

Limonia Engleriana Perkins, Frag. Fl. Philip. 163 (1905).

Belou glutinosa Skeels in U. S. Dept. Agr. Bur. Pl. Ind. Bull. CLXII. 26 (1909).

Chaetospermum glutinosum Swingle in Jour. Wash. Acad. Sci. III. 102 (1913).—Merrill, Spec. Blanco. 203 (1918).

Limonia Engleriana Perk. published in 1905 was based on actual specimens, Dr. Perkins in describing it on the basis of flowering specimens only, not realizing that her species was identical with the much earlier *Limonia glutinosa* Blanco. All the other names are based on Blanco's original description, the several changes in the specific name being purely arbitrary ones and contrary to all codes of botanical nomenclature. The genus has been confused with *Feronia* and *Aegle* (*Belou*), from both of which it is abundantly distinct as shown by Dr. Swingle,

¹ *Chaetospermum*, a new genus of hard-shelled citrus fruits. Jour. Wash. Acad. Sci. III. 99-102, fig. 1 (1913).

² Roemer, M. J. Familiarum naturalium regni vegetabilis synopses monographicae, . . . (Hesperides) I. 39 (1846).

³ Sylloge Fungorum X. 706 (1892).

who gives an amplified description of the species and discusses its generic relationships. The new generic name here proposed commemorates the work of Dr. Walter T. Swingle in the classification of the relatives of the genus *Citrus*.



ABIES CEPHALONICA Loudon.
Trees on the Panachaikon Mountain (type locality of *A. panachaica* Heldreich).